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ABSTRACT

This 292-item bibliography lists materials on teacher effectiveness research published from 1978 to early 1984. Reference to some earlier works of significance is also included. Teacher effectiveness research is here defined to include principally studies conducted in the presage-context-process-product tradition in an attempt to determine relationships between teacher behaviors and students' cognitive and affective attainments. The bibliography includes reviews, critiques, and reports of studies in which a wide selection of variables was considered. Discussions of observational instruments are also included. (Author/JD)

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BIBLIOGRAPHIES IN EDUCATION

No. 77

TEACHER EFFECTIVENESS RESEARCH
PART I: GENERAL WORKS

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TEACHER EFFECTIVENESS RESEARCH

This two-part bibliography lists materials on teacher effectiveness research published from 1978 to early 1984. Reference to some earlier works of significance is also included. Teacher effectiveness research is here defined to include principally studies conducted in the presage -- context -- process -- product tradition in an attempt to determine relationships between teacher behaviours and students' cognitive and affective attainments. Part I (Bibliography 77) includes reviews, critiques and reports of studies in which a wide selection of variables was considered. Discussions of observational instruments are also included. Part II (Bibliography 78) deals with such specific aspects of the topic as instructional time, classroom management, use of questions, reinforcement, planning and structure.

The sources consulted in preparing this bibliography include: Canadian Books in Print (Univ. of Toronto Press), Canadian Education Index (CEA), Current Index to Journals in Education (Oryx), Directory of Education Studies in Canada (CEA), Resources in Education (ERIC), and Subject Guide to Books in Print (Bowker).

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This bibliography was prepared in the George G. Croskery Memorial Library by Geraldine Gilliss and Marita Moll.

Geraldine Gilliss
Director
Research and Information
Services

*1. Aitkin, M., and others. Teaching Styles and Pupil Progress: A Re-Analysis. British Journal of Educational Psychology, v51 n2 p170-86 Jun 1981.

Using latent class and variance component analysis models, the authors reexamined data from the "Teaching Styles and Pupil Progress" report (Bennett, 1976). Their analysis indicated three distinguishable but overlapping teaching styles, two of which correspond closely to the "formal" and "informal" classes designated in the report.

**2. Anderson, Linda M. Classroom-Based Experimental Studies of Teaching Effectiveness in Elementary Schools. Austin: Texas Univ. Research and Development Center for Teacher Education, 1979. 53p. Available ERIC. ED 178 540.

Three recent large-scale experimental studies have built on a data base established through several correlational studies of teaching effectiveness in elementary school. These three studies have in common a treatment that addresses several routine teaching tasks and suggests some principles and techniques for effectively fulfilling those tasks. All three studies yielded results indicating that the treatment teachers did use many of the behaviors suggested to them and that their students had higher adjusted achievement scores. In this article, the three studies are reviewed and suggestions are made about future experimental studies of teaching effectiveness.

*3. Anderson, Linda M. Short-Term Student Responses to Classroom Instruction. Elementary School Journal, v82 n2 p97-108 Nov 1981.

Emphasizes that learning is influenced by the student's active response to instruction. Teachers are advised to remain aware of student responses by initiating work contracts with students and are encouraged to help students learn to respond appropriately to instruction by arranging the classroom environment so that attention and motivation are increased.

**4. Anderson, Linda M. Student Responses to Classroom Instruction. East Lansing: Michigan State Univ. Institute for Research on Teaching, 1981. 28p. Available ERIC. ED 212 626.

Research on teacher effectiveness addresses questions about how teachers bring about desirable student outcomes. Until recently, most research has focused on long-term outcomes, such as achievement gains over one year. Short-term outcomes--students' immediate responses to instruction--are also important. Four categories of short-term student outcomes that may be observed by teachers are attention, initiative, success, and understanding of how and why to do

classroom work. For each category, research has suggested ways to encourage and sustain immediate student responses that support learning. Two principles underlie the suggestions. First, teachers must remain aware of student responses by creating work contacts with all the students frequently and on a regular basis. The second principle reflected in many of the suggestions is that teachers can help students learn how to respond to instruction by arranging the classroom environment to make attention and initiative more likely and by teaching students how and when to attend, seek help, and apply certain strategies for understanding instruction and performing work. A list of references is appended.

**5. Anderson, Linda M., and others. Analyses of Treatment Effects in an Experimental Study of First Grade Reading Groups. Austin: Texas Univ. Research and Development Center for Teacher Education, 1978. 31p. Available ERIC. ED 177 463.

This report is related to a study of first grade reading groups and presents highlights of an analysis comparing treatment and control teachers on their use of 22 instructional principles suggested in an instructional model. The principles are presented in categories that relate to getting and maintaining the students' attention, introducing the lesson and new material to the students, calling on individual students in the group, dealing with individual learning rates within the group, giving feedback to incorrect and correct answers, and giving praise and criticism. The results discussed indicate that certain teacher behaviors can be influenced by treatment.

6. Anderson, Linda M., and others. An Examination of Classroom Context: Effects of Lesson Format and Teacher Training on Patterns of Teacher-Student Contacts during Small-Group Instruction. Journal of Classroom Interaction, v15 n2 p21-26 Sum 1980.

This report presents an analysis of data from an experimental study of teaching effectiveness. Results indicated that both the format and the experimental treatment influenced classroom processes.

**7. Anderson, Linda M., and others. An Examination of Classroom Context: Effects of Lesson Format and Teacher Training on Patterns of Teacher-Student Contacts During Small Group Instruction. R&D Report No. 4074. East Lansing: Michigan State Univ. College of Education; Texas Univ., Austin. Research and Development Center for Teacher Education. 24p. Available ERIC. ED 189 075.

This study of effective teaching behaviors focused on small group instruction of young children in beginning

reading skills. Ten first grade teachers used an instructional model which emphasized individual questioning of students, systematic selection of students for oral reading, and sustained feedback from the teacher to the individual student. Teacher-student interactions were observed during two lesson formats: questions and answers and oral or silent reading for content. Patterns emerging from the interactions are analyzed and interpreted in light of other teacher effectiveness research. It was observed that applying the principles outlined in the instructional model improved the pace of the reading sessions and minimized distractions and interruptions.

*8. Anderson, Linda M., and others. An Experimental Study of Effective Teaching in First-Grade Reading Groups. Elementary School Journal, v79 n4 p193-223 Mar 1979.

This study was an effort to translate research findings into classroom practice and to verify experimentally the correlational findings of earlier field studies. The treatment was an instructional model made up of 22 principles believed to promote effective instruction in small groups in the early grades. The model was made up of two parts, one dealing with management of the group as a whole, the other emphasizing the responses that teachers give in feedback to students' answers. A brief manual describing the principles was given to 17 first-grade teachers who agreed to use the instructional model. Ten other teachers served as a control group. Ten of the treatment and all the control group were observed regularly throughout the year to obtain information on implementation of the model. Student achievement was measured by the reading subtests of the Metropolitan Achievement Tests, Level 1. Results of the study indicated a significant difference in student achievement, with the treatment groups obtaining higher adjusted scores. Observations of treatment and control groups indicated many differences in teachers' behaviors that were expected on the basis of the treatment, although not all parts of the instructional model were highly implemented by the treatment group. The process-product analyses revealed that many, although not all, components of the instructional model were related to achievement.

**9. Anderson, Linda M., and others. Context Effects and Stability of Teacher Behaviors in an Experimental Study of First Grade Reading Group Instruction. R&D Report No. 4091. Austin: Texas Univ. Research and Development Center for Teacher Education, 1978. 30p. Available ERIC. ED 177 485.

As part of an investigation of effective first grade reading group instruction, this report analyzes the relationships between certain teacher behaviors and the contexts in which they occur. Behaviors of interest discussed are those describing teacher selection of and

feedback to response opportunities, as well as the overall level of response opportunities. The contexts examined are: slow-paced questioning and answering without individual materials provided to students, workbook or worksheet activities, and reading of new material from the basal textbooks. Results presented indicate moderately high stability across the contexts examined for most groups of variables, although some were more stable than others.

**10. Anderson, Linda M., and others. Principles of Small-Group Instruction in Elementary Reading. East Lansing: Michigan State Univ., Institute for Research on Teaching, 1982. 15p. Available ERIC. ED 223 981.

The results of an earlier experimental study of the effectiveness of a set of principles for small group instruction in first grade reading groups called for a revision of the list of principles. Revised principles were written for (1) group organization (seating, transitions, starting the lesson); (2) the introduction of lessons and activities (overviews, new words, and work assignments); (3) student participation (asking questions, taking turns, calling on students, and monitoring individuals); (4) teacher questions and student answers (academic focus, word attack questions, waiting for answers, giving needed help, offering explanations); (5) correct student reponses (acknowledging correct answers, explaining the answer when necessary, and follow-up questions); and (6) praise and criticism (praise in moderation, correction rather than criticism, and specificity in praise).

**11. Artley, A. Sterl. Reading Teachers I Have Seen. Paper presented at the annual meeting of the International Reading Association World Congress on Reading, Hamburg, West Germany, 1978. 13p. Available ERIC. ED 162 288.

Both research about what teachers do that makes a difference in pupil learning and observation of teaching practices give information about what is effective and helpful in teaching reading. Research shows that effective teachers spend more time in task-related activities and less time dealing with matters unrelated to course content. They understand their objectives, are carefully organized, and give close attention to pupils working independently. There is a close association between teacher expectation and pupil learning. Use of interchangeable responses (summary responses made by teachers to pupils' questions or statements) is an effective teaching technique. An anomaly is that effective teachers of low socioeconomic status pupils do not encourage pupils to analyze, synthesize, evaluate, or do anything other than answer narrow questions asked by the teacher. This anomaly indicates that techniques appropriate for one age or group may be inappropriate for another. In observing teachers, it is possible to see that bored teachers produce

bored children. Reading aloud, commendation for successful performance, absence of censure for poor performance, and allowing independent reading time are all effective techniques observed in classrooms.

**12. Au, Kathryn H. Relationships Between Selected Teacher Behaviors and Pupil Academic Achievement: Preliminary Observations (Sample Project A). The Effect of Teacher Input on Student Performance (Sample Project B). Technical Report #35. Honolulu: Kamehameha Schools. Kamehameha Early Education Project, 1974. 30p. Available ERIC. ED 158 853.

This Kamehameha Early Education Program (KEEP) report describes two studies on the effects of student-teacher interaction on student performance. Study I explored the relationship between three kinds of teacher behaviors (modeling, teacher attention to individual students, and praise-giving to individual students) and the pupil's academic achievement. The daily achievement of nine kindergarten children in the upper third of their class was recorded. Videotapes of 16 lessons (15 to 30 minutes each) on the use of cuisenaire rods for mathematical development were analysed. Results indicated that neither the teacher's modeling behavior nor the amount of praise and amount of individual attention awarded by her was related to the children's academic achievement. Study II investigated the effect of two methods of teacher input on student performance: working with one small group for a 5-minute period while the other children worked independently (condition A) and moving from table to table giving individual assistance as needed (condition B). The subjects, 28 kindergarten children, were divided into five heterogeneous groups. One group of six students was assigned to condition A and the rest to condition B. Differences in achievement between condition A and B were not statistically significant, although there were more statements of academic input to students under condition B than under condition A.

**13. Au, Kathryn Hu-pei, and Jana M. Mason. A Microethnographic Approach to the Study of Classroom Reading Instruction: Rationale and Procedures. Cambridge, Mass.: Bolt, Beranek and Newman, Inc. Illinois Univ. Urbana. Center for the Study of Reading, 1982. 50p. Available ERIC. ED 215 314.

This paper details how classroom reading instruction can be studied by using microethnographic techniques, wherein classroom events are videotaped and then carefully analyzed to determine their social organizational features. A short introduction to the use of microethnographic methods is presented, followed by an analysis of a lesson taught by a white teacher to a group of black students, which offers a step-by-step illustration of how patterns of teacher-pupil interaction in a reading lesson can be identified. It is suggested that the analysis of participation structures used

to instruct students provides a means of relating data on classroom lessons to achievement and offers particular promise for the study of instruction in classrooms with low achieving students.

14. Avalos, Beatrice. Teacher Effectiveness: Research in the Third World -- Highlights of a Review. Comparative Education, v16 n1 p45-54 Mar 1980.

This article is based on an exploratory review of studies conducted by local researchers and collected and analyzed by nationals of the following countries and regions: Latin America, Sub-Saharan Africa, the Arab Middle East and North Africa, India, Thailand, Malaysia and the Philippines.

15. Avalos, Beatrice, and Wadi Haddad. A Review of Teacher Effectiveness Research in Africa, India, Latin America, Middle East, Malaysia, Philippines and Thailand: Synthesis of Results. Ottawa: International Development Research Centre, 1979. 166p. Not available ERIC. ED 190 551.

Research studies of teachers in developing nations are discussed and synthesized. An examination of government policies in the different countries provides a background against which the findings are viewed. Institutional and methodological characteristics of the studies viewed in each region are analyzed. Unresearched or unanswered problems are identified and suggestions are offered for future research. Results from this review and parallel reviews in developed nations are compared and significant contrasts are pointed out.

**16. Barnes, Susan. Synthesis of Selected Research on Teacher Findings. Report No. 9009. Austin: Texas Univ., Research and Development Center for Teacher Education, 1981. 31p. Available ERIC. ED 223 569.

An overview of research on elementary secondary classroom teaching presents a synthesis of findings from large-scale, classroom-based studies on teacher effectiveness. Three sets of major research efforts, dealing with classroom management and organization, systematic instruction, and effective instruction, were selected for review. Certain variables appeared to relate to student achievement: (1) work-oriented learning environment; (2) sufficient amount of time allocated to academic tasks; (3) warm and supportive classroom environment; (4) well-organized classroom; (5) close monitoring of students and active teacher participation; (6) quick teacher response to misbehavior; (7) systematic instruction pattern involving careful preparation of students for new material; (8) reasonably brisk instructional pace coupled with active information giving

and receiving between teacher and students; (9) consistent teacher feedback on student performance; (10) opportunity for individual practice but with this individual time limited so that students stay actively involved with the class; (11) teacher encouragement of interactions where students are expected to participate and be challenged but still be successful; and (12) carefully organized instructional activities to both motivate students and provide appropriate practice in the lesson. Selected variables from these studies are documented in tabular form, and a profile is presented of an effective teacher. Lists of 11 reference notes and 11 references are included.

*17. Bennett, S.N. Recent Research on Teaching: A Dream, a Belief and a Model. British Journal of Educational Psychology, 48, 127-47 Jun 1978.

An attempt is made to provide an interpretive framework for the findings of recent research on teaching at primary school level. A model of teaching/learning processes is outlined prior to an investigation of the empirical linkages between the elements of the model. Implications of the model for teaching skills are also explored.

18. Berliner, David. Viewing the Teacher as a Manager of Decision. Education Digest, v47 n6 p20-23 Feb 1982.

Discusses different preinstructional and instructional variables over which teachers have some control and which may affect learning, including content choice, wait time, time on task, form of instruction, success rate, monitoring, questioning, and orientation to academics.

*19. Berliner, David C. Using Research on Teaching for the Improvement of Classroom Practice. Theory into Practice, v19 n4 p302-08 Fall 1980.

A staff development program that conceptualizes the teacher as "executive," or manager of time factors, curriculum, and instruction would help teachers to deal with the complexities inherent in the modern elementary school classroom.

**20. Blai, Boris, Jr. Effective College Teaching Facilitates Student Thinking at a Junior College. 1982. 8p. Available ERIC. ED 215 713.

A survey was conducted at Harcum Junior College, a private, independent college for women, to ascertain student perceptions of the pedagogical characteristics of teachers who they believed had been most successful in developing their thinking processes. The responses of 390 students, 78% of the

total student body, were compared with the responses of 117 male and female students attending a 4-year state college in New York and of 184 male and female students attending a University Center in New York to a similar, previously conducted survey. In both studies, students were asked to select from among 13 instructor characteristics the three that had the greatest impact on their thinking. A high level of agreement was found among all three groups with respect to the five most influential qualities; i.e., expert knowledge of subject; ability to stimulate student interest; enthusiastic attitude toward subject; ability to explain clearly; and systematic organization of subject matter. Among the qualities viewed by students as having the least impact on their thinking processes were attempts to use individualized instruction, tolerance toward student disagreement, and fairness in marking and grading tests.

**21. Blair, Timothy R. Development of Inservice Models to Implement Teacher Effectiveness Research Findings. Paper presented at the Annual Meeting of the National Reading Conference, Clearwater Beach, 1982. 9p. Available ERIC. ED 226 324.

The most popular approach to effective change in teacher inservice programs is predicated on an organizational or bureaucratic problem-solving model that does not take into consideration teacher attitudes. A study of inservice programs both highlighted the implementation stage as being crucial for determining whether a proposed change would be successful and isolated effective and ineffective implementation strategies. The study also identified the degree to which teachers believed in themselves and their ability to be successful with all students as a major factor in the change process. In order to incorporate teacher effectiveness findings into classroom practice, a recommended strategy would be to focus on attitudes and implementation. This approach stresses teacher potential rather than deficiencies, allows teachers to use alternative pedagogies to accomplish a goal, and recognizes teachers' individual styles and personalities as well as the traits of individual classrooms. Other key components of an inservice model that focuses on the classroom teacher as the real agent of change include (1) faculty identification of goals and objectives congruent with their assumptions and beliefs, (2) continual monitoring of proposed changes, and (3) adaptation of changes being implemented to pupils and programs.

*22. Blaney, Robert L. Effective Teaching in Early Childhood Education. Elementary School Journal, v80 n3 p128-32 Jan 1980.

Reviews and discusses research findings on teaching effectiveness in the field of early childhood education.

*23. Bolster, Arthur S. Jr. Toward a more effective model of research on Teaching. Harvard Educational Review, v53 n3 p294-308 Aug'83.

Classroom teachers wish to improve their craft and educational researchers want to generate useful knowledge, yet educational research seldom influences classroom teaching. Reflecting on twenty years' experience as a junior high school teacher and as a university professor involved in formal studies of classroom teaching, Arthur S. Bolster, Jr. examines the genesis and perpetuation of the divergent perspectives of teachers and educational researchers concerning how knowledge is formulated and determined. He advocates a sociolinguistic ethnographic approach as the research methodology most likely to generate knowledge that is both intellectually rigorous and helpful in teacher development.

24. Bonfadini, John E. A Competency-Based Instruction Matrix. Man/Society/Technology, v41 n8 p14-15 May-Jun 1982.

Presents a model for developing competency-based instruction via a matrix containing five conceptual dimensions: area of instruction, learning units, time allocations, levels of mastery, and objective classification.

*25. Borich, Gary D. The Appraisal of Teaching: Concepts and Process. Final Report. Austin: Texas Univ., Research and Development Center for Teacher Education, 1976. 601p. Available ERIC. ED 127 333. Published by Addison-Wesley, Reading, Massachusetts, 1977.

This volume is designed to serve as a sourcebook of conceptual frameworks and selected readings whose content is prerequisite to conducting appraisals of teaching. Primarily, its contents are intended to serve as a graduate level reader to be used in the context of college classrooms, seminars and in-service workshops or wherever opportunities exist to further discuss and explore the issues and concepts which are contained within it. The volume begins with five introductory chapters which set the stage for the selections which follow by discussing fundamental concepts and providing a conceptual framework with which to view each segment of the appraisal process to be discussed. Thus, this volume is divided into two parts: introductory chapters describing fundamental concepts and conceptual frameworks (Part I) and selected readings (Part II) chosen to illustrate or expand the concepts and frameworks introduced in Part I. These initial chapters together with the readings provide a reasonably representative sample of the teacher appraisal concepts which have been discussed to date at national conferences and symposia and in the popular and professional literature. The five topics into which this volume is organized are: defining teacher competencies; measuring teacher performance; building teacher appraisal systems; using teacher appraisal techniques and procedures; and examining the validity of the appraisal process.

*26. Borich, Gary D. Implications for Developing Teacher Competencies from Process-Product Research. Journal of Teacher Education, v30 n1 p77-86 Jan-Feb 1979.

Five different process-product studies are presented along with a definition of competency. Implications of these attempts to identify relationships between teacher behavior and pupil outcome are summarized.

**27. Borich, Gary D. Implications for Developing Teacher Competencies from Process-Product Research. 1979. 25p. Available ERIC. ED 186 374.

Five studies identifying the relationships between teacher behavior and pupil achievement are reviewed. The purpose of the review is to report the most practical implications for teacher education. The behaviors listed in these studies represent only those teacher processes, skills, or performances that have exhibited statistically significant relationships to pupil outcomes in mathematics or reading. The research methodology used in each study is reviewed and results are analyzed. Implications for teacher education programs are discussed.

*28. Borich, Gary D., and others. Convergent and Discriminant Validity of Five Classroom Observation Systems: Testing a Model. Journal of Educational Psychology, 70, 2, 119-28 Apr 1978.

Using five readily available classroom observation systems, three 50-minute videotapes of classroom interaction were rated for each of twelve social studies teachers. Comparisons yielded 23 categories that measured similar behaviors across systems, approximately half of which satisfied all validity tests. Implications for process-product studies and the convergent and discriminant validity model are discussed.

**29. Borich, Gary D., and others. What the Teacher Effectiveness Research Has to Say About Teaching Practices and Student Performance. R&D Report No. 5069. Austin: Texas Univ. Research and Development Center for Teacher Education, 1979. 91p. Available ERIC. ED 189 077.

This research report examines various teacher and student behaviors and their effects on academic achievement. Pupil achievement levels were assessed before and after observing and recording teacher and student behaviors occurring in the classroom. Correlational data was collected from these classroom observations and program evaluations. The first half of the report detailed research limitations, cognitive and affective aspects of learning, socioeconomic status as a predictor of achievement, teacher functions, and a conceptual model for examining pupil experience. The second half interpreted the research results. Factors having

a positive correlation to student achievement were time, student participation and cooperation, direct teaching methods, praise, teacher use of evaluative feedback, establishment and implementation of reasonable conduct rules, clarity, and small group instruction. Among the negative achievement factors were indirect teaching methods, belittlement of pupils, peer pressure control, and unsupervised individual and small group work. Final conclusions, references, and tables follow the report.

*30. Breuning, Stephen E. Precision Teaching in the High School Classroom: A Necessary Step Towards Maximizing Teacher Effectiveness and Student Performance. American Educational Research Journal, 15, 1, 125-40 Win 1978.

The effectiveness of precision teaching and traditional teaching were compared in high school classes. In a second experiment, students' performance improved when good performers were allowed more hours of employment. The results suggest that poor academic performance may be due to an interaction between teaching procedure and incentive motivation.

*31. Breuning, Stephen E. Reply. American Educational Research Journal, v15 n1 p145-7 Win 1978.

Breuning answers the criticisms expressed by Brophy (see #37) in his commentary on Breuning's study of precision teaching (see #30). The author repeats his conclusion that precision teaching was more effective than traditional teaching.

*32. Brooks, Douglas M. Ethnographic Analysis of Instructional Method. Theory into Practice, v19 n2 p144-47 Spr 1980.

Instructional methods are operational exchanges between participants within environments that attempt to produce a learning outcome. The classroom teacher's ability to produce a learning outcome is the measure of instructional competence within that learning method.

**33. Brophy, Jere E. Advances in Teacher Effectiveness Research. East Lansing: Michigan State Univ. Institute for Research on Teaching, 1979. 24p. Available ERIC. ED 170 281.

Research linking teaching behavior to student learning is reviewed in this study. Precis of findings of research over a period of 25 years are presented with an analysis of trends of both research methodology and teaching methods.

**34. Brophy, Jere E. Advances in Teacher Effectiveness Research. Occasional Paper No. 18. East Lansing: Michigan State Univ. Institute for Research on Teaching, 1979. 28p. Available ERIC. ED 173 340.

Following a review of research findings on the relationship between teacher behavior and student achievement, current activities in teacher effectiveness research are discussed. Two major trends emerge in recent research studies. Existing correlational findings on the topic are being integrated and applied to contexts beyond basic skills instruction in the elementary grades. Clusters of correlational findings are being assessed for degree of implementation by teachers in their daily instructional methods. Recent findings indicate that direct instruction in small groups coupled with formal classroom organization and management are as effective in producing satisfactory learning results at the secondary level as they are in teaching basic skills at the elementary level.

35. Brophy, Jere E. Advances in Teacher Research. Journal of Classroom Interaction, v15 n1 p1-7 Win 1979.

Classroom research linking teaching behavior and classroom management to student learning, especially in the area of basic skills, is reviewed.

**36. Brophy, Jere E. Fostering Student Learning and Motivation in the Elementary School Classroom. Occasional Paper No. 51. East Lansing: Michigan State University, Institute for Research on Teaching, 1982. 66p. Available ERIC. ED 216 008.

This paper reviews educational theory and research on student learning gains (especially in basic skills in elementary grades) and on motivating students to value and engage willingly in academic tasks. Research on the link between teacher behavior and student learning and attitudes is addressed in the first section, followed by a section discussing resulting policy implications for providing basic skills instruction and an effective learning environment. Research topics discussed include: (1) teacher expectations and role definitions (2) importance of student time on task; (3) value of active instruction from a teacher; (4) need for flexible teacher behavior; and (5) feasibility of teacher-student matching. Limitations on applying this reseach are noted, particularly the use of approaches derived from classical learning theory and its basis in nonclassroom settings. The relevance and potential applications of recent research on student motivation is examined in the next section. Research topics considered are: need theory, reinforcement theory, relevance of education to the needs of students, attribution theory, and building intrinsic and continuing motivation in students. Recommendations which are made for

teacher education in the final section would affect entry standards and accountability and preservice and inservice education programs. A list of references is appended.

*37. Brophy, Jere E. Precision Teaching in the High School Classroom: A Commentary. American Educational Research Journal, v15 n1 p141-3 Win 1978.

In a review of Breuning's study of conventional vs. precision teaching (see #30), Brophy praises the research design used. However, the interpretation and reporting of Breuning's data are questioned. The effects of instructional method have been confused with the effects of incentive manipulation. The practicality and ethical justification are also criticized.

**38. Brophy, Jere. Recent Research on Teaching. Paper presented at the annual meeting of the Northeastern Educational Research Association, 1980. 36p. Available ERIC. ED 204 280.

This paper reviews highlights of research on teaching conducted in the 1970s, discusses current trends, and considers accomplishments likely to be forthcoming in the 1980s. The latter include better attention to context in collecting classroom data and qualifying its probable generalizability, more and better measurement of progress toward affective outcomes of instruction (in addition to continued attention to cognitive outcomes), development of explanations for process-process and process-outcome linkages presently recognized but not fully understood, and better integration of research on teaching with research on learning.

*39. Brophy, Jere. Successful Teaching Strategies for the Inner-City Child. Phi Delta Kappan, v63 n8 p527-30 Apr 1982.

A significant body of research, including several large-scale correlational studies, indicates that effective teachers of the basic skills differ systematically from those who are ineffective. Eight teacher characteristics are associated with success in producing achievement gains, including expectations, classroom management, curriculum pacing, active teaching, and teaching to mastery.

*40. Brophy, Jere E. Teacher Behavior and Its Effects. Journal of Educational Psychology, v71 n6 p733-50 Dec 1979.

Present and possible future process-outcome research is assessed, with emphasis on methodological considerations. Compilation of detailed normative data about classrooms, and explication and integration of process-process as well as process-outcome relations are suggested. Studies designed

with particular contexts in mind rather than classroom instruction in general are predicted.

**41. Brophy, Jere E. Teacher Behavior and Its Effects. Occasional Paper No. 25. East Lansing: Michigan State Univ. Institute for Research on Teaching, 1979. 51p. Available ERIC. ED 181 014.

Research on linkages between teacher behavior and student learning is examined. Present and possible future process-outcome research is assessed with an emphasis on methodological considerations. Compilation of detailed normative data about classrooms, including explication and integration of process-process as well as process-outcome relationships, is argued for. It is suggested that large field studies addressed to classroom instruction "in general" will give way to studies designed with particular contexts in mind, using measures of both processes and outcomes (especially short-term outcomes) appropriate to these contexts.

*42. Brophy, Jere E. Teacher Behavior and Student Learning. Educational Leadership, v37 n1 p33-38 Oct 1979.

Research linking teacher behavior to student learning is making significant progress in developing a scientific basis for teacher education.

**43. Brophy, Jere E. Using Observation to Improve Your Teaching. Occasional Paper No. 21. East Lansing: Michigan State Univ. Institute for Research on Teaching, 1979. 18p. Available ERIC. ED 173 339.

The value of constructive classroom observation in improving teachers' behavior and classroom management is pointed out, and a method of providing this observation is suggested. It is recommended that teachers working as a group observe each other's classrooms. Teachers who differ in experience and expertise can, by this means, make contributions and assistance by providing feedback to each other. The following principles are offered for use in observation: feedback should (1) involve specific, concrete behaviors or characteristics; (2) be credible and presented with good intentions and in understandable terms; (3) include specific guidelines for change; and (4) lead to a commitment to initiate specific changes.

44. Bullock, Donald H. Behaviorism and NSPI: The Erratically Applied Discipline. Performance and Instruction, v21 n3 p4-8,11 Apr 1982.

Examines the influences of behaviorist psychology on performance and instruction technologies. The basic assumptions of behaviorism are outlined, reinforcing

contingencies are reviewed, conditioning is described, and such specific topics as stimulus control, behavior chaining, and successive approximation are discussed.

*45. Burns, Michael G. Establishing an Environment for Efficacious Classroom Education. Canadian Vocational Journal, v15 n2 p6-8 Aug 1979.

Discusses the controversy over the use of technocratic or humanistic instructional delivery systems in the classroom, pointing out that both are essential for effective education and may occur simultaneously in the same classroom. Defines the qualities of technology and humanism in the instructional environment.

*46. Burstall, Clare. The Matthew Effect in the Classroom. Educational Research, v21 n1 p19-25 Nov 1978.

Examines research evidence on the possible influence of student characteristics on teacher attitudes/behavior and influence of teacher classroom behavior on attitudes, aspirations, and achievements of students. Evidence drawn from small-scale observational studies, large-scale surveys, and laboratory experiments is discussed, and some implications for teacher training are noted.

**47. Burstein, Leigh. Implications from the Beginning Teacher Evaluation Study for the IEA Second Mathematics Study. Paper presented at the annual meeting of the American Educational Research Association, Toronto, 1978. 25p. Available ERIC. ED 162 901.

The International Association for the Evaluation of Educational Achievement plans for the Second Mathematics Study are deemed inadequate for the identification of the effects of instruction on mathematics education. Suggested modifications are based on the results of two studies. The first is a discussion of major methodological limitations of the Six Subjects Survey. The second is a comprehensive classroom process measurement used by the Beginning Teacher Evaluation Study which included extensive classroom observation and teacher reports of allocated time for specific pupils in selected content areas.

**48. Calfee, Robert C., and others. Designing Reading Instruction for Cultural Minorities: The Case of the Kamehameha Early Education Program. Cambridge, Mass.: Harvard Univ. Graduate School of Education, 1981. 109p. Available ERIC. ED 215 039.

This is a report on the Kamehameha Early Education Program (KEEP), a research and development project designed to find ways of improving the school performance of educationally

disadvantaged Hawaiian children. The project, implemented in a laboratory school setting and continuously monitored, is described as a reading instruction program for children in kindergarten and in first to third grade. The report provides a historical background on the multidisciplinary research that led to the development of the program, explains evaluation procedures followed, and discusses results of evaluation obtained as of the reporting period. A brief description of a typical morning in a KEEP classroom leads to discussion of two program components, the direct teaching of comprehension through the reading program, and the social organization of the classroom. The laboratory teacher's role in program development and implementation and teacher training processes are then examined. Included as appendices are an explanation of the Kamehameha Reading Objective System developed to guide teacher planning and program monitoring, samples of teacher training materials used in the program, and a detailed list of specific program goals for teachers and for pupils.

*49. Campbell, Elizabeth M., and W.J. Campbell. A Comparative Study of Teaching Styles in the States Secondary Schools of New Zealand and Queensland. Australian Journal of Education, 22, 1, 1-12 Mar 1978.

Teaching styles in New Zealand and Queensland, Australia, are considered within the framework of basic value orientations--industrial, social, academic, and humanistic.

50. Chadbourne, Joan W., and others. Toward Intentional Teaching: A Human Endeavor. Humanist Educator, v19 n3 p98-106 Mar 1981.

Examines the acquisition of teacher skills which facilitate learning on both affective and cognitive levels. The successful teacher "intentionally" chooses between a wide range of alternative teaching behaviors when reacting to the situation at hand. Flander's Interaction Analysis System and Ivey Taxonomy provide information useful to the "intentional" teacher.

**51. Chevrette, Patricia, and William H. Rupley. Research in Effective Classroom Instruction: Implications for Preservice and Inservice Education. Texas: Texas A and M Univ., College Station. Coll. of Education, 1982. 16p. Available ERIC. ED 221 523.

Emphasis on the traditional approach in educational research has given way to the scientific approach, and, gradually, the focus of research has shifted from the teacher to include student behavior. Many variables previously associated with teacher behavior are recognized as being associated with student behavior. Future research must use previous studies to formulate a clearer pattern for effective teaching. Researchers have relied on a global description of process/product to test the effectiveness of learning

experiences, but that research emphasis should also include studies of the relationship between teacher competencies and learning experiences. Since pupil achievement is related to these experiences, they must be controlled to facilitate learning. Certain variables that have already been proven valid through study may have such strong influence over learning that other variables may be masked. Future studies should attempt to control such variables as management skills to see to what extent other variables may affect learning. Research has been successful in identifying effective teacher behaviors, notably in the early grades, in teaching basic skills. Studies identifying those teaching variables that apply to upper grades and in different context areas need to be developed.

52. Cherny, Merron. A Canadian Perspective: Focus on Talk. English Education, v13 n1 p32-35 Feb 1981.

An overview of studies on the role of talk in student learning.

*53. Clark, Christopher M. Five Faces of Research on Teaching. Educational Leadership, v37 n1 p29-32 Oct 1979.

Identifies five approaches to research on teaching, and groups them into primarily quantitative approaches and primarily qualitative approaches.

*54. Coker, Homer, and others. How Valid Are Expert Opinions About Effective Teaching? Phi Delta Kappan, v62 n2 p131-34,149 Oct 1980.

Reports on research that confounds normal expectations concerning the teacher behavior that encourages student achievement and self-concept development. For instance, using praise or rewards and pausing, eliciting, and responding to student questions were negatively correlated to student achievement gains.

**55. Coladarci, Theodore, and N.L. Gage. Minimal Teacher Training Based on Correlational Findings: Effects on Teaching and Achievement. Paper presented at the annual meeting of the American Educational Research Association, Los Angeles, 1981. 101p. Available ERIC. ED 201 610.

Four classroom-based experiments in which teachers were trained to use a direct instruction model were analyzed to compare the results of intensive and minimal training methods. The direct instruction model involves extensive coverage of content, student time allocated to instructional tasks, and teacher time allocated to the encouragement of students. The observed results of those studies indicated that teachers could receive minimal training

in a teaching method and successfully implement it in the classroom with significant improvement in student achievement. A fifth study, designed to test these findings, failed to corroborate the positive results obtained previously. After a year-long study, experimental-group teachers with a minimum of training did not evidence markedly greater conformity to the training recommendations than the control-group teachers did. The classes of these two groups of teachers were not appreciably different in end-of-year student academic achievement. Training-related behavior among experimental-group teachers was not modified enough to effect appreciable changes in subsequent student achievement. These results, and the results of the previous four studies, are analyzed, and recommendations are made for further research.

56. Cooley, William W., and Bor-Jiin Mao. The Sample of Classroom Time Observed. Journal of Classroom Interaction, v17 n1 p31-36 Win 1981.

The problem of obtaining reliable descriptions of classroom events is examined. Using sampling theory, the amount of classroom time to be sampled and observed to obtain precise descriptions is analyzed. Results suggest that previous studies of classrooms have used inadequate samples to estimate the behaviors of teachers and students.

**57. Cooper, James M. Microteaching: Forerunner to Competency Based Teacher Education. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1979. 15p. Available ERIC. ED 170 278.

Although a review of the literature on competency-based teacher education (CBTE) reveals little or no reference to microteaching's contribution, microteaching was a precursor of CBTE and had a direct influence in its acceptance and development. A review of CBTE's essential characteristics and a comparison with microteaching shows that microteaching and the technical skills approach: (1) attempted to break down the global teaching act into more precisely defined, observable, and trainable skills, thus serving as a beach-head for the rapid spread of CBTE; (2)broke important new ground in the area of accountability; (3) pioneered the use of criterion-referenced evaluation, which is common in CBTE: (4) emphasized learning objectives and competencies, and performance rather than knowledge; and (5) predated CBTE in the use of systems approach.

58. Cooper, Shirley Howard. Hope for the Future: A View of Research in Teacher Effectiveness. Quest, monograph 28 p29-37 Sum 1977.

Recent research on the topic of effective teaching is reviewed in this article, with emphasis given to teacher

behavior, research methodology, and directions for future research.

*59. Copeland, Willis D. Teaching-Learning Behaviors and the Demands of the Classroom Environment. Elementary School Journal, v80 n4 p163-77 Mar 1980.

Examines the effect of classroom environment on teaching and learning behaviors of children and teachers. Second-, third-, and fourth- grade elementary school classrooms were selected for this study. The author suggests the findings support the contention that influence in classrooms is bidirectional in nature. Classroom events are affected by students as well as teachers.

60. Corbin, Charles B., ed. Teaching Behavior and Sport History. AAHPER Research Consortium Symposium Papers. Volume 1, Book 1. Washington, D.C.: American Alliance for Health, Physical Education, and Recreation, 1978. 87p. Available ERIC. ED 166 178. Microfiche only.

This collection of symposium papers is published for members of the American Alliance for Health, Physical Education, and Recreation with the intention of providing a current synthesis of research in physical education. This volume contains papers discussing and analyzing research on teacher behaviors in the field of athletics and movement education and their correlation with pupil achievement. Also included are papers on play environments for children. Two articles examine professional football and cycling from an historical perspective.

61. Crocker, Robert K., and others. Treatment and ATI Effects for Pupil Achievement and Preference under Two Experimental Conditions of Teacher Control in Sixth Grade Science Classes. Journal of Research in Science Teaching, v16 n2 p105-21 Mar 1979.

Investigates the influence of treatment and the interactions between treatments and selected pupil characteristic variables, with respect to pupil achievement and preference for treatment, and examines treatment-teacher interactions. Among the findings, this study suggests that students prefer to operate in less structured modes for the medium or long term.

62. Cuban, Larry. Persistence of the Inevitable: The Teacher-Centered Classroom. Education and Urban Society, v15 n1 p26-41 Nov 1982.

High school teaching practices have resisted change since 1900 and remain essentially teacher centered. This stability may be explained by: (1) the deterministic influence of classroom organizational structures; (2) innate conservatism in

teaching; (3) teachers' enduring beliefs about educational goals; and (4) society's economic structure which encourages instructional practices that foster passivity and obedience.

**63. Defino, Maria E. (ed.), and Heather Carter (ed.). Changing Teacher Practices: Proceedings of a National Conference (Austin, Texas, October 1981). Austin: Texas Univ., Research and Development Center for Teacher Education, 1982. 104p. Available ERIC. ED 223 582.

In this report of a working conference, experts in the teacher education field considered the adequacy of current research on teaching practices and obstacles in the implementation of changes based on research findings. In "How Useful Are the Findings from the Research on Teaching," Jane A. Stallings discussed findings from research on teaching which appear most amenable to translation into staff development activities. Richard C. Williams, in "Changing Teacher Behaviors: From Symbolism to Reality," presented an analysis of school contexts from an organizational perspective, and of the way these contexts impinge upon changing teacher practice. In "An Expanded View of the Student Outcomes That Are Built or Restrained by Teaching Processes and Structures," Beatrice A. Ward considered a variety of student outcome variables which might be used to assess teaching effectiveness. Sara Edwards asked conference participants to respond to a series of questions about research and teacher education for "Recommendations for Study on Changing Teacher Practice." A "Summary of the Discussions" at the working conference, prepared by Heather Carter, discussed issues surrounding use of research as a basis for change in teacher practice, the current knowledge base to address these issues, and the needed knowledge base to address these issues. A list of the conference participants is appended.

**64. Dembo, Myron H., and others. Teacher-Student Interaction in Special Education Classrooms. Paper presented at the annual meeting of the American Educational Research Association, Toronto, 1978. 23p. Available ERIC. ED 163 674.

Teacher behavior and expectations and teacher-student communication patterns were investigated among urban and suburban teachers of educable mentally retarded and educationally handicapped (emotionally maladjusted and learning disabled) students. Classroom observers recorded teacher-student interaction using a version of the Brophy-Good observation system. The results indicated that both groups of teachers tend to maximize success by aiming low-level questions to specific students, use reinforcement and positive feedback, do not differ in their questioning behavior, and do not appear to exhibit differential communication to students with varying characteristics.

*65. Denton, Jon J., and James F. McNamara. Conceptual Models for Determining the Influence of Classroom Teachers on Learner Cognitive Attainment. Journal of Experimental Education, v48 n2 p165-69 Win 1979.

Procedures from educational policy research were used to produce three conceptual models for determining teacher effects in classrooms. The use of a system of equations, as developed for these models, shows promise for theory building in teacher education and instructional design.

**66. Denton, Jon J., and Sherrill Norris. Learner Cognitive Attainment: A Basis for Establishing a Student Teacher's Competence. 1979. 26p. Available ERIC. ED 177 128.

The feasibility of evaluating the performance of student teachers by observing the academic achievement of pupils was explored. The following questions were posed: Do expectancies of learners held by student teachers influence pupil achievement on a single instructional unit when prior achievement of pupils is held constant? Does the amount of prior solo teaching time and opportunity-to-learn time provided by the student teacher influence pupil achievement on a single instructional unit when prior achievement of pupils and expectancies held by student teachers are held constant? Does the planning and instructional effectiveness of the student teacher as perceived by the university supervisor affect pupil achievement on a single instructional unit when the other variables under consideration are held constant? Does this group of variables provide a model to explain the relationship between student teaching styles and pupil achievement?

*67. Denton, Jon J., and others. An Evaluation Design to Examine the Instructional Effects of Classroom Teachers. Educational Evaluation and Policy Analysis, v2 n5 p5-15 Sep-Oct 1980.

Empirical findings lend credence to the postulation that differences among teachers regarding content knowledge (being more pronounced in the upper grades regarding cognitive attainment of course specific content), instructional skills, and teaching experience do result in cognitive attainment differences among classes of learners.

68. Dobson, Russell L., and others. The Language of Teaching-Effectiveness and Teacher-Competency Research. Viewpoints in Teaching and Learning, v58 n2 p23-33 Spr 1982.

It is argued that: (1) the language of teaching-effectiveness and teacher-competency research is promoting subtly a technical and political ideology; and (2) the efforts of this research activity serve to perpetuate a set of myths about the teaching experience. An alternative focus on the "unique

person who teaches" is suggested for teaching-effectiveness research.

*69. Doyle, Walter. Classroom Effects. Theory into Practice, v18 n3 p138-44 Jun 1979.

This essay explores the importance of the classroom environment on teaching and learning, and suggests a framework for conducting further research in the field.

**70. Doyle, Walter. How Do Teaching Effects Occur? Austin: Texas Univ. Research and Development Center for Teacher Education, 1979. 44p. Available ERIC. ED 178 543.

This report contains an analysis of the mechanisms that connect teaching processes to student achievement and the circumstances contributing to the establishment of treatment conditions in classrooms. The first section is focused on the way in which academic tasks operating in a classroom influence the quality of student learning. The second section is directed to the consequences for students of four types of academic tasks and probable student reactions to these task structures. It is suggested that students develop strategies for managing the degree of ambiguity and risk inherent in classroom tasks. Special attention is given to the way in which attempts to achieve cooperation influence teacher planning and decision making. Implications of this analysis are drawn for interpreting teaching effectiveness data, planning preservice and inservice teacher education, and designing instructional improvements.

71. Doyle, Walter. Interpreting Teaching Effectiveness Research. Viewpoints in Teaching and Learning, v54 n4 p141-53 Oct 1978.

In exploring the question of teaching effectiveness research, this essay provides historical insight, an analysis of present day uses of this research data, and examples of the potential utility of this research.

*72. Doyle, Walter. Research on Classroom Contexts. Journal of Teacher Education, v32 n6 p3-6 Nov-Dec 1981.

Educational research has begun to focus more on subject matter, grade level, and student characteristics as factors which influence the effectiveness of teaching practices. Research into classroom contexts has been useful in understanding classroom management and on-task behavior.

**73. Doyle, Walter. Research on Classroom Contexts: Toward a Knowledge Base for Policy and Practice in Teacher Education. 1981. 19p. Not available ERIC. ED 223 581.

Potential contributions of research on classroom contexts to preservice teacher education curriculum are outlined in this paper. A review of traditional teacher effectiveness research cites studies that either extrapolated from laboratory research to design a teaching model or used direct classroom observations to correlate behaviors to outcomes without considering situational variables. The inadequacies of each approach are discussed, and the features of classroom context research are introduced. The emphasis of the studies is on classroom management and decision making. An analysis of findings on academic tasks suggests two conclusions: (1) Tasks provide a structure within which students perceive and interpret teaching events; and (2) Different types of tasks are associated with different configurations of classroom processes. Successful efforts at clarifying the management tasks are cited. The conclusion states the basic argument of the paper: that contexts pose tasks which shape information processes.

**74. Doyle, Walter. Student Mediating Responses in Teaching Effectiveness. Final Report. Denton: North Texas State Univ., 1980. 190p. Available ERIC. ED 187 698.

A report is given on research exploring the theory that stimulation from the teacher does not directly initiate student learning but activates cognitive processes that result in learning. Combined research into classroom processes and student information processing was conducted. An analysis of treatment theories that operate in research on teaching is presented. A description is given of the essential features of a cognitive model of student mediation, as well as an analysis of different types of academic tasks and their relationship to outcomes of instruction. The meaning students attach to classroom events and the way knowledge is gained from accomplishing classroom tasks is analyzed. A model of classroom tasks is applied to teaching effectiveness research to interpret existing findings and suggest directions for further research.

*75. Doyle, Walter. The Tasks of Teaching and Learning in Classrooms. R & D Report No. 4103. Correlates of Effective Teaching. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1979. 48p. Available ERIC. ED 185 069.

Research on classroom teaching is discussed within the conceptual framework of the analysis of student classroom tasks. Three types of learning tasks are illustrated: understanding; memory; and routine problem-solving according to an algorithm. It is contended that most

classroom research projects study teachers' and students' actions, rather than learning tasks; it is assumed that learning is taking place as a result of these actions. Furthermore, there is more emphasis on how much is learned than on what is learned. Two important questions concerning teaching models are discussed: what are the actual tasks posed for students and teachers in classrooms?, and why do these tasks exist? After discussions of classroom task goals, ambiguity and risk concerning task accomplishment, and the role of students and teachers, three conclusions are presented: (1) there is not a direct cause-and-effect relationship between specific teacher behavior and student achievement, rather, teacher behavior is shaped by interaction with students; (2) learning tasks directly shape achievement; and (3) learning tasks do not always take place in the classroom.

**76. Duckworth, Kenneth, ed., and others. Creating Conditions for Effective Teaching: Proceedings of a Conference (Eugene, Oregon, July 17-18, 1981). Eugene: Oregon Univ. Center for Educational Policy and Management, 1981. 189p. Available ERIC. ED 209 771.

A conference held at the Center for Educational Policy and Management, Eugene (Oregon), in July 1981 addressed the topic of "Creating Conditions for Effective Teaching." The subjects covered include the implications of research on teacher effectiveness, collective bargaining, and school governance. At each of these three sessions, a paper was presented and then discussed by designated respondents as well as by conference participants in general. Both the papers and edited transcripts of the discussions are included in the proceedings. A fourth session summarized the conference and offered ideas for future research on school improvement.

**77. Duffy, Gerald G. Teacher Effectiveness Research: Implications for the Reading Profession. East Lansing: Michigan State Univ. Institute for Research on Teaching, 1981. 55p. Available ERIC. ED 204 344.

Designed to create a foundation for collaboration between research on teaching and research on reading, this critical review of teacher effectiveness first provides a historical perspective as a means for creating a "common ground" between the two fields. Teacher effectiveness findings are then presented in two major categories. The first examines direct instruction, classroom management, and psychological conditions as these contribute to opportunity to learn. The second examines the research on teacher planning and teacher decision making as these illustrate the prevalence of technical teacher behavior. Implications for the reading profession are presented in terms of teacher education, reading research, and possible cooperative ventures between research on reading and research on teaching. The prevalent theme throughout the review is the need for both reading and

teaching research to begin looking beyond opportunity to learn and technical teacher behavior to examine the qualitative dimensions of teacher effectiveness.

*78. Dunkin, Michael J., and Bruce J. Biddle. The Study of Teaching. New York: Holt, Rinehart and Winston, 1974. 490p.

This book is regarded as a landmark review of the status of research in teaching. Of particular interest is the attempt on the part of the authors to identify the particular "commitments" which underlie the work of various researchers and the different ideologies which shape their perception of the nature of teaching. Six clusters of research studies are then outlined and assessed, including those dealing with (1) classroom climate, (2) management and control, (3) the classroom as a social system, (4) knowledge and intellect, (5) logic and linguistics, and (6) sequential patterns of classroom behaviour. The concluding chapters outline the implications of the findings for teachers and makes recommendations for researchers concerning the conduct of future studies of teaching.

**79. Dunn, Marvin, and others. Successful Teaching of Disadvantaged Children: From the Perspective of 94 Title I Elementary School Teachers Who Were Identified As Being The Most Effective In Their Schools. 1980. 34p. Available ERIC. ED 205 488.

A study was conducted of teachers of disadvantaged children during the 1979-80 school year in Dade County, Florida. The study involved nearly 100 inner city elementary teachers who were identified as being the most effective teachers in their schools. The teachers responded to a lengthy questionnaire which asked very detailed questions about how they worked with their children. Almost all of the questions were open-ended. The most repeated theme to emerge from the study was that structure and organization and careful planning are of primary importance in the inner city classroom. Clear rules and regulations were established from the first day of school and were closely adhered to. Most of the teachers used some type of structured motivational system in their classroom, with positive reinforcement for good behavior frequently taking the form of rewards. Almost all of the teachers emphasized that their success came from their love of children, their respect for children, and the ability to let children know they care about them. The questionnaire with responses by categories is appended.

**80. Durkin, Dolores. What Classroom Observations Reveal about Reading Comprehension Instruction. Technical Report No. 106. Cambridge, Mass.: Bolt, Beranek and Newman, Inc., 1978. 94p. Available ERIC. ED 162 259.

Reading and social studies instruction in 39 third- through

sixth-grade classrooms in central Illinois was observed in a study designed to determine whether elementary school classrooms provide comprehension instruction. Among the findings were that practically no comprehension instruction was seen but that comprehension assessment, usually carried on through interrogation, was common; that other kinds of reading instruction were not seen with any frequency; that in addition to being interrogators, teachers also appeared to be assignment-givers, spending a large part of the observed periods on giving and checking assignments; that sizeable amounts of time went to activities categorized as "transition" and "noninstruction"; and that teachers did not see the social studies period as a time to improve children's comprehension abilities, but instead were concerned about covering content and having children master facts. (The report discusses definitions and examples of comprehension instruction, notes differences between comprehension instruction and comprehension assessment, explains the categories used for teacher and student behavior, offers suggestions for future research, and reports the findings of the study in descriptive and tabular form.)

**81. Eash, Maurice J., and Hersholt C. Waxman. Students' Perceptions of Effective Teaching in Different Subject Areas. Paper presented at the annual meeting of the American Educational Research Association, Boston, 1980. 19p. Available ERIC. ED 191 913.

The question of whether certain teaching behaviors as perceived by students are related to the students' achievement in different subject areas is investigated. A revised questionnaire, Our Class and Its Work (OCIW), assesses student perceptions of teacher behavior along the following nine scales: variability; enthusiasm; task-orientation; criticism; opportunity to learn; use of structuring comments; multiple levels of questioning; mismanagement; and sustainity. The OCIW was administered in two Chicago schools: to 136 parochial school students in grades 2 through 8, and to 96 public school students in grade 4. In the parochial school, two years of total reading, vocabulary, language arts, mathematics concepts, mathematics computation, social studies, and science achievement scores on the Science Research Associates Achievement Tests were obtained. In the public school, two years of total reading, mathematics concepts, mathematics problem solving, and total mathematics achievement scores from the Iowa Test of Basic Skills were obtained. In both schools, OCIW scales and previous academic achievement were entered as independent variables in a multiple regression equation predicting academic achievement for the current year. Results indicated that several OCIW scales are significant predictors of academic achievement and vary across academic subjects.

82. Eash, Maurice J., and others. Evaluating Teacher Behavior from Student Perceptions. Studies in Educational Evaluation, v6 n3 p293-95 1980.

Traditionally research into the effects of teacher behaviors on learning outcomes has involved direct observational techniques. This paper departs from tradition and describes the initial development and use of a new instrument measuring student perceptions of numerous key teaching behaviors.

*83. Ebmeier, Howard, and Thomas L. Good. The Effects of Instructing Teachers about Good Teaching on the Mathematics Achievement of Fourth Grade Students. American Educational Research Journal, v16 n1 p1-16 Win 1979.

Experimental fourth grade teachers were instructed about characteristics of effective mathematics teachers. Using a standardized mathematics achievement test as the dependent variable, the model proved effective. The interactions between student aptitudes, teacher style, and instructional model helped to interpret the influences on student mathematics achievement.

**84. Edwards, Sara. Changing Teacher Practice. A Synthesis of Relevant Research. Austin: Texas Univ., Research and Development Center for Teacher Education, 1981. 39p. Available ERIC. ED 223 566.

Research on improving teacher practice is examined, focusing on the collaboration of researchers and practitioners in developing effective change strategies. Three studies are introduced that provide long-range data and form a knowledge base: (1) the Rand Corporation study of federal programs supporting educational change (1978); (2) the I/D/E/A study of change in individual schools (1974); and (3) the Concerns Based Adoption Model (CBAM) on implementation of innovations (1979). Other studies on the definition of teacher change and the use of the process-product approach are reviewed, followed by a discussion of the use of developmental models in designing teacher change efforts. Studies on the impetus for change and problems and questions associated with intervention in teacher practice are also included. In the conclusion, a weighted matrix design using findings from developmental models and a process-product orientation is cited as a promising change strategy. It is suggested that a collaborative study be developed that would allow researchers and practitioners to identify a generalizable system to change teacher practice and to use research studies in widely varying contexts.

**85. Eggert, Wallace. Teacher Process Variables and Pupil Products. Paper presented at the annual meeting of the American Educational Research Association, Toronto, 1978. 41p. Available ERIC. ED 166 174. Microfiche only.

The main purpose of this study was to investigate the relationship between teacher behaviors and pupil behaviors, achievement, and attitudes. The study was conducted in six elementary school classrooms. Eight high-inference scales were also used to obtain measures of classroom management, instructional skills, and interpersonal skills. It was found that private interactions (1) occurred more often than public interaction, (2) favored low achievers in terms of frequency, (3) were positively related to pupil unproductive behavioral styles, and (4) were negatively related to pupil attitudes. Direct teaching patterns were functional for pupil achievement but not for pupil attitudes.

**86. Emans, Robert. Teaching Behaviors in Reading Instruction: A Review of the Research and Critique. Paper presented at the Annual Meeting of the American Association of Colleges for Teacher Education, Detroit, 1983. 49p. Available ERIC. ED 227 093.

This paper summarizes research findings on teacher behavior and its relationship to student reading achievement. Research studies included in the review identified actual teaching behaviors, included observations of teacher-learner interactions, were limited to elementary school, and were conducted between 1966 and 1972. Subjects covered in the studies include: (1) instructional time and student achievement; (2) direct instruction; (3) classroom climate and teacher management; (4) teacher praise and criticism; (5) teacher expectations; (6) teachers' use of questions; (7) specialized subject matter teaching behaviors; and (8) changing teacher behavior through interactive inservice programs. A discussion is presented on the research methodology used in these studies, the general reliability of research findings, and significant and recurring findings brought forward by this review. A list of 126 references is included.

*87. Erlich, Oded, and Gary Borich. Occurrence and Generalizability of Scores on a Classroom Interaction Instrument. Journal of Educational Measurement, v16 n1 p11-18 Spr 1979.

Generalizability theory was used to study the occurrence and generalizability of classroom interaction measures. Results indicated infrequent occurrence and lack of generalizability of many behaviors of the Brophy-Good Teacher-Child Dyadic Interaction System.

*88. Erlich, Oded, and Richard J. Shavelson. The Search for Correlations Between Measures of Teacher Behavior and Student

Achievement: Measurement Problem, Conceptualization Problem, or Both? Journal of Educational Measurement, v15 n2 p77-89 Sum 1978.

Measures of teacher behavior are related to student achievement in fifth grade reading and mathematics instruction. It was found that those measures of teacher behavior which were generalizable (that is, more highly reliable) were found to be significantly related to student achievement.

*89. Evertson, Carolyn M. Differences in Instructional Activities in Higher- and Lower-Achieving Junior High English and Math Classes. Elementary School Journal, v82 n4 p329-50 Mar 1982.

Twenty-five junior high school mathematics teachers and 25 English teachers who taught in both higher- and lower-ability class sections were observed during the school year in order to examine any differences in instructional behavior which might occur between the two classes.

*90. Evertson, Carolyn M. Relationships between Classroom Behaviors and Student Outcomes in Junior High Mathematics and English Classes. American Educational Research Journal, v17 n1 p43-60 Spr 1980.

Sixty-eight teachers (39 English and 29 mathematics) were observed in two of their class sections. Relationships among teaching behaviors and student outcomes in mathematics classes suggest that elements of both the direct instruction model and indirect influence model are supported. Results in English classes are less clear.

**91. Evertson, Carolyn M. Teacher Behavior, Student Achievement and Student Attitudes: Descriptions of Selected Classrooms. Correlates of Effective Teaching. Austin: Texas Univ. Research and Development Center for Teacher Education, 1979. 37p. Available ERIC. ED 204 330.

English and mathematics teachers in junior high schools were observed for an average of 20 one-hour periods throughout the school year. The purpose of the study was to determine the relationship between the affective behavior of the teacher and the students' academic achievement and attitudes. Anecdotal information based on the classroom observers' summary descriptions are used to capture the salient characteristics and the overall tone of teacher behavior and classroom environment. High achievement-high attitude classes were characterized by good organization, a high proportion of time in instructional activity, and task-orientation. Low achievement-low attitude classes were chaotic, unstructured

classrooms with less task-orientation. The descriptive summaries suggest that there is a distinct relationship between good classroom management (planning and organization of activities) and student learning and behavior.

**92. Evertson, Carolyn M., and Donald J. Veldman. Changes Over Time in Process Measures of Classroom Behavior. R&D Report No. 4060. Austin: Texas Univ. Research and Development Center for Teacher Education, 1979. 35p. Available ERIC. ED 189 072.

The behavior of junior high school students and teachers in English and mathematics classes was observed from November through April in an attempt to identify the relationship between teacher and student behavior, compare behaviors in the two different classes, and note changes in behavior over this period. Some fluctuation was observed in task orientation, attention, student initiated comments and social contacts. Small variations in behavior were observed in comparing English and mathematics classes. Descriptions of thirty specific behaviors observed over this period are provided and results are presented in both tabular and graphic form. An analysis of the data is presented.

**93. Evertson, Carolyn M., and Randall C. Hickman. The Tasks of Teaching Classes of Varied Group Composition. Paper presented at the annual meeting of the American Educational Research Association, Los Angeles, 1981. 29p. Available ERIC. ED 208 530.

Research in classrooms must be sensitive to new dimensions of teaching tasks that emerge at the group level. There are at least two tasks that can be identified as being affected by changes in group characteristics. The first task is to set the stage -- the teacher must establish the proper context or setting to support academic activities. The second task is to instruct. The data reported here is from a subsample of 16 junior high school mathematics and English classes. The classes were categorized into three groups -- extremely heterogeneous, homogeneous with high ability, and homogeneous with low ability. The heterogeneous classes pose problems because teachers must plan and execute instructions so that all students are provided with a focus for their behavior throughout the class or period while the teacher must differentiate instruction to meet widely differing needs. In the high ability group, the teacher must use group characteristics to maximize the amount of academically engaged time while minimizing the intrusion of the needs for social organization. The low ability group poses serious problems both in setting the stage and in instructing. Teachers often accept less desirable forms of participation in an attempt to maintain some student involvement in classroom activities.

**94. Evertson, Carolyn M., and others. Elementary School Classroom Organization Study: Methodology and Instrumentation. Austin: Texas Univ. Research and Development Center for Teacher Education, 1980. 160p. Available ERIC. ED 205 486.

The Classroom Organization Study, conducted in Austin, Texas, was designed to answer some very specific questions about establishing and maintaining classroom organization in low socioeconomic status elementary schools that results in greater student time on task, exposure to content, and achievement. The ultimate purpose of the study was to produce knowledge of specific teacher behaviors that produce effective management of time, instructional materials, contacts between the teacher and students, student participation in classroom activities, and the external constraints imposed on teachers. This report details the history of the study, the training course received by observers, and data collection activities, and summarizes preliminary findings from the study. More effective organizers appeared to: (1) have thought in advance about rules and procedures necessary and to have established them before problems arose; (2) be able to plan activities and procedures with a student's perspective; and (3) introduce independent work gradually. The instruments used by the observers are reproduced in their entirety. The study, from its inception to completion, covered a time period from the school year of 1976-77 to the end of school in the spring of 1978.

**95. Evertson, Carolyn M., and others. The Junior High Classroom Organization Study: Summary of Training Procedures and Methodology. R&D Report No. 6101. Austin: Texas Univ. Research and Development Center for Teacher Education, 1980. 54p. Available ERIC. ED 189 050.

This report presents an overview of the history of the Junior High Classroom Organization Study, designed to answer questions concerning effective instruction in junior high school English and mathematics classes. Nineteen trained observers were sent to 52 classrooms in the Austin (Texas) Independent School District. Observers kept written records of classroom events, student concentration/interest ratings, teacher competency ratings, and time logs. Other data used in this report include student ratings of teachers, achievement tests, and teacher interviews and questionnaires. Focusing on classroom organization and management of time, materials, and student teacher contact, the study presented data on specific teacher behavior that produced greater 1) student concentration, 2) exposure to content, and 3) achievement. Data analysis, reference notes, and appendices follow the report.

96. Evertson, Carolyn M., and others. Predictors of Effective Teaching in Junior High Mathematics Classrooms. Journal for Research in Mathematics Education, v11 n3 p167-78 May 1980.

The observed behaviors of three highly effective and six less effective junior high school mathematics teachers were compared. A number of differences were obtained in the areas of time use, interaction styles, management, and personal characteristics. Relationships between these results and other process-product research are noted.

**97. Evertson, Carolyn M., and others. Process-Outcome Relationships in the Texas Junior High School Study: Compendium. Paper presented at the Annual Meeting of the American Educational Research Association, Toronto, 1978. 93p. Available ERIC. ED 166 192.

This report presents the process-outcome relationships discovered in the Texas Junior High School Study of correlates of effective teaching. Classroom processes and cognitive and affective indices of outcome are discussed for two subject areas (English and math) and for classrooms with varying levels of entering ability. The four separate papers in this compendium focus on the following: (1) overview of methodology and rationale; (2) high inference ratings of general behaviors; (3) low inference coding of specific behaviors; and (4) comparison of findings for cognitive and affective criteria. The results indicated that student characteristics were most influential on learning outcomes in English classes, but that teacher behavior was more important in math classes. Effective instruction was more readily identifiable in the math classes as well. Further results emphasized that caution should be exercised in any attempt to use student ratings in teacher evaluation. The data for the research is presented in tables, and references are provided.

**98. Evertson, Carolyn M., and others. Report of the Methodology, Rationale and Instrumentation of the Junior High Classroom Organization Study. R&D Report No. 6100. Austin: Texas Univ. Research and Development Center for Teacher Education, 1980. 313p. Available ERIC. ED 189 076.

This report contains a complete record of the methodology and instrumentation of the Junior High Classroom Organization Study. The purpose of the study was to delineate specific effective teacher behaviors. Included in this report are a description of the selection and training of observers, and guidelines for writing narrative descriptions, coding observations, rating student engagement time, and noting time intervals on the narrative record. Sample forms for these procedures are presented. Samples are also given of data collection instruments used throughout the year-long observation period, including questionnaires

sent to participating teachers, resulting feedback to teachers, and data analysis instruments.

**99. Evertson, Carolyn M., and others. Texas Junior High School Study: Final Report of Process-outcome Relationships. Volume I. R&D Report No. 4061. Austin: Texas Univ. Research and Development Center for Teacher Education, 1978. 344p. Available ERIC. ED 173 744.

This is the first in a series of four reports describing a study of 1,614 junior high school mathematics and English students and 69 of their teachers that was undertaken to discover the effects of different teaching behaviors on cognitive and affective student outcomes. After describing the methodology in some detail, the document presents findings from high-inference measures for cognitive outcomes and includes extensive tables of data. This is followed by a discussion of findings from low-inference measures for cognitive outcomes that also includes tables of data and descriptions of student and teacher behaviors. A discussion of relations of high- and low-inference measures with student behaviors follows. The report includes a discussion of some of the implications of the study, a summary of the methods and procedures used for data collection and reduction, and the more important patterns of the results.

**100. Evertson, Carolyn M., and others. Texas Junior High School Study: Teacher Self-Reports and Student Outcomes. Executive Summary and Volume I. Austin: Texas Univ. Research and Development Center for Teacher Education, 1980. 275p. Available ERIC. ED 206 698.

The primary emphasis of the Texas Junior High School Study was the investigation of process-outcome relationships in 136 junior high school math and English classes. A total of 68 teachers were observed in nine junior high schools in a large urban school district. Teachers also responded to a questionnaire and an interview focusing on presage variables such as teachers' beliefs, expectations, assumptions about teaching, and self-reports of instructional practices. Two outcome measures were used: an achievement test reflecting the subject matter taught, and student ratings of teachers. Volume I presents relationships among teacher self-report variables measured by the questionnaire and interview, and the two outcome measures. The findings for mathematics teachers indicated that successful teachers are committed to a structured, whole-class teacher- and textbook-centered approach. The findings for English teachers indicated a strong interaction between teacher effectiveness and student entering ability, and a lack of correspondence between cognitive and affective measures of teacher effectiveness. Other results are discussed in detail, and these findings are compared with previous studies of presage variables.

*101. Fallon, Berlie J. Principals Are Instructional Leaders -- Hit or Myth? NASSP Bulletin, v63 n423 p67-71 Jan 1979.

Principals are not and never have been maximally effective instructional leaders. If any group in education is capable of achieving high quality in educational programs, it is the teachers themselves.

**102. Fedigan, Larry. School-Based Elements Related to Achievement and Elements Related to Student Success in Schooling and Education. Executive Summary. Two Reviews of the Literature Commissioned by the Minister's Advisory Committee on Student Achievement. Edmonton, Alta.: Ministers Advisory Committee on Student Achievement. 18p. Available ERIC. ED 181 042.

A literature review is summarized on the effects of educational and environmental factors on student achievement. Environmental factors include background and community influences, such as social, economic, racial, educational and achievement levels; home environment; and qualities of students, such as academic readiness, motivation, and social behavior. Educational factors are comprised of such variables as teacher characteristics, the structure of the teaching-learning situation, school facilities, and pupil personnel services. Fifty-five studies are synthesized and the factors which are positively and negatively related to student achievement are summarized. Some of the findings based on a review of American, Canadian, and British research of the relationship of school based factors to student achievement are: direct teaching is more effective than indirect methods, especially in the lower elementary grades and with low socioeconomic status students; indirect teaching may be more effective with older, higher socioeconomic status students and in subject areas like English; teachers' different expectations of students (based on sex and socioeconomic status) perpetuate social stratification and cultural sex differences; experimental instructional approaches show no consistent pattern of achievement gains over traditional materials; and mastery learning is conducive to student success and efficient learning.

**103. Fedigan, Larry. School-Based Elements Related to Achievement: A Review of the Literature. Edmonton: Alberta Dept. of Education. Ministers Advisory Committee on Student Achievement, 1979. 119p. Available ERIC. ED 181 043.

Eight major classroom observation studies correlating process variables (teaching techniques), and context variables (characteristics of school, curriculum, and student), with teaching effectiveness, (particularly achievement gains) were reviewed. This need to match process variables with context variables, rather than search for a universal teaching style, was cited. One match has already been defined--traditional

teachers in low socioeconomic classrooms appear to be consistently effective. Also, there is a strong subject matter/teaching style relationship in higher grades. Like the process variables, context variables--notably, classroom climate, teacher expectations, ability, socioeconomic status, mastery learning, and individualized instruction--generally have failed to correlate universally with achievement. Results of Canadian teacher effectiveness studies are similar; the most promising developments are taking place at Simon Fraser University, Memorial University and the University of Alberta. Current research is attempting to establish consistent generic relationships and to translate relationships into statements of cause and effect. Because this is necessarily a slow process, conclusions may be limited and tentative. Finally, the separation of educational research variables into school-based and non-school-based domains has considerable academic, political, and economic implications.

*104. Fenstermacher, Gary D. How should implications of research on teaching be used? Elementary School Journal, v83 n4 p496-499 Mr'83.

The author argues for application of the research results through personal elaboration (i.e., through decisions made by individual practitioners) rather than through structural elaboration (i.e., through decisions imposed by administrators). It is argued that the personal elaboration approach is consistent with the way people would like teachers to treat students, and avoids the negative consequences of structural elaboration.

**105. Fillion, B., and E.N. Wright. Recent Research Re Language Learning and Classroom Processes. No. 162. Toronto: Toronto Board of Education, Research Dept., 1982. 51p. Available ERIC. ED 215 363.

A selective view of recent major areas of research into school processes related to language outcomes supports the contention of the Bullock Report and of many educational theorists who say that there is no one best way to improve language and literacy, but that schools and school variables can and do make differences. The research that is reviewed reflects the variations of research into processes and outcomes, and is comprised of (1) integrative studies of school processes and educational outcomes, (2) studies of language learners and language processes, and (3) selected studies relating to individual variables, such as teacher behavior and student achievement. The reported findings suggest that the greatest amount of language development occurs when teaching styles and classroom situations actively engage pupils in using language for purposes that the students see as meaningful. The reviewed research also tends to support the position that in the

achievement of language development and basic literacy teachers must rely more heavily than usual on the active, cooperative participation of the child. This implies that the successful teacher uses thought-provoking questions during instruction and challenges students at their levels of ability while providing a great deal of success and positive reinforcement, particularly to the less able student in the lower grades.

**106. Fisher, Charles W., and others. Teaching and Learning in the Elementary School: A Summary of the Beginning Teacher Evaluation Study. Report VII-1. Beginning Teacher Evaluation Study Technical Report Series. San Francisco: Far West Lab. for Educational Research and Development, 1978. 51p. Available ERIC. ED 165 322.

This executive summary of the multiyear Beginning Teacher Evaluation Study (BTES) focuses principally on the findings of Phase III-B of this research program on teaching effectiveness. One outcome of the BTES study was a concept that makes it possible to measure individual student learning by noting observable variables of student behavior in the classroom. Academic Learning Time (ALT), as the concept is called, is defined as the amount of time a student spends attending to academic tasks while also performing with a high success rate. The more ALT a student accumulates, the more he or she can be assumed to be learning. The study also revealed five general interrelated components of effective teaching: diagnosis, prescription, presentation, monitoring, and feedback. Teachers who pay attention to all these factors tend to have students who accumulate high rates of ALT. Two other variables that are correlated with effective teaching emerged from the study. One was academic orientation, or the extent to which the teacher emphasized, valued, and worked toward cognitive achievement. The other was orientation toward affect, or the extent to which the teacher was aware of, acknowledged, and valued student feelings.

107. Freyberg, P.S. Teacher Intentions and Teaching Decisions. Educational Theory, v30 n1 p39-45 Win 1980.

It is necessary to understand the intention of a teacher in a specific situation if the behaviors of the teacher and student are to be fully understood. The interactive nature of teaching emphasizes the need for an understanding of the role of feedback in teaching methods.

**108. Gage, N.L. Four Cheers for Research on Teaching. 1978. 44p. Available ERIC. ED 178 460.

This paper reviews the reliability of several efforts by educational researchers to determine variables in teacher

behavior that influence student attitudes and achievement. In particular, works by Rosenshine (1971), Dunkin and Biddle (1974), and Rosenshine and Furst (1970) are examined and evaluated in terms of research criteria developed by Heath and Nielson (1974) and Glass (1976). Efforts to replicate the results of educational research are cited, and the significance of various studies is discussed. The appendices include tables illustrating the results of field studies concerning the effect of teacher indirectness on pupil achievement as well as an extensive bibliography.

*109. Gage, N.L. The Scientific Basis of the Art of Teaching. New York: Teachers College Press, 1978. 122p.

In this book the author argues that educational research has yielded useful knowledge about relationships between teaching behaviors and student achievement. He then discusses a variety of substantive and methodological issues in teacher effectiveness research.

*110. Gage, N.L. Teacher Effectiveness and Teacher Education: The Search for a Scientific Basis. Palo Alto, Calif.: Pacific Books, 1972. 226p.

Part one of this book discusses the research on teacher effectiveness. Part two deals with research in teacher education. The author concludes that there is reason to hold high expectations for the development of a scientific basis for teacher education and the improvement of teacher effectiveness.

*111. Gage, N.L. When Does Research on Teaching Yield Implications for Practice? Elementary School Journal, v83 n4 p492-496 Mar'83.

The author compares attitudes toward findings in education and medicine, and points out that a statistical finding which is regarded as of limited significance in educational research may be treated as having considerable significance in medicine. He suggests that small effect sizes may sometimes have important implications when the benefits and costs of implementing the findings are taken into account.

*112. Gage, N.L. The Yield of Research on Teaching. Phi Delta Kappan, v60 n3 p229-35 Nov 1978.

The path to increasing certainty becomes not the single excellent study, which is nonetheless weak in one or more respects, but the convergence of findings from many studies, which are also weak, but in many different ways. The dissimilar or nonreplicated weaknesses leave the replicated finding more secure.

**113. Gage, N.L., and Theodore Coladarci. Replication of an Experiment with a Research-Based Inservice Teacher Education Program. Final Report. Stanford: Stanford Univ. School of Education, 1980. 319p. Available ERIC. ED 181 023.

Research is reported on inservice teacher training through "minimal" intervention--i.e., one in which recommended teaching practices are communicated to teachers by mail, along with rationales, examples, and self-administered and self-scored quizzes. Training materials were mailed to the experimental-group over a five-week period, two two-hour classroom observations were made, pupil and teacher questionnaires were administered, and pupil-achievement data were collected. Comparison of the training group and an untrained group indicated the teacher behaviors did not differ significantly and pupil achievement did not differ significantly. Teacher conformity to recommendations correlated positively and substantially with class achievement.

**114. Gage, N.L., and others. An Experiment on Teacher Effectiveness and Parent-Assisted Instruction in the Third Grade. Paper presented at the annual meeting of the American Educational Research Association, Toronto, 1978. 196p. Available ERIC. ED 160 648.

Correlational findings from four major teacher effectiveness studies were incorporated into a teacher training program whose preliminary results are presented in this set of five papers. N.L. Gage begins by briefly introducing this program's background and rationale. The second paper, Experimental Effects of In-Service Teacher Training Derived from Process-Product Correlations in the Primary Grades, by John Crawford and Jane Stallings, examines teaching skills which are associated with student achievement; instructions for developing teachers' skills are appended. Lyn Corno, in Effects of Parent Instruction on Teacher Structuring and Student Participation in the Third Grade: An Aptitude-Treatment Interaction Approach, discusses the effectiveness of a parent assisted program to develop students' cognitive and behavioral processes which promote successful adjustment to school. Although student attrition and aptitude treatment interaction complicate the analysis of program effects, results are generally positive. In the fourth paper, Nicholas Stayrook and John Crawford present preliminary findings from the analysis of classroom observational data. Finally, Alexis L. Mitman discusses Teacher Self-Report in an Experiment on Teacher Education and Effectiveness. Teachers' reactions to their training and factors affecting teacher training implementation are valuable in interpreting other findings.

**115. Gil, Doron, and Philip S. Heller. Classroom Discipline: Toward a Diagnostic Model Integrating Teacher's Thoughts and Actions. Occasional Paper No. 13. East Lansing: Michigan State Univ. Institute for Research on Teaching, 1978. 15p. Available ERIC. ED 167 514.

The diagnostic approach is probably the most comprehensive approach to classroom discipline because it is designed to prevent the recurrence of symptoms by discovering and treating the causes of behavior problems. The diagnostic model of data are appended.

*116. Gilliss, Geraldine. Research in Teaching and the Education of Teachers. Paper presented at Fall Conference of Association of Educational Research Officers of Ontario, Toronto, December 1, 1983. Ottawa: Canadian Teachers' Federation. 39p.

This paper discusses recent research in teaching findings under the headings: (1) Instructional time, (2) Expectations, (3) Questions, (4) Structure and planning, (5) Classroom management, and (6) Reinforcement, feedback and praise. The author argues that, given the context of uncertainty within which professional practice always operates, as well as the continuing demand for accountability, serious efforts must be made to ensure that these findings become an important part of the knowledge base of both beginning and practising teachers.

**117. Good, Thomas L. The Missouri Mathematics Effectiveness Project: A Program of Naturalistic and Experimental Research. Paper presented at the annual meeting of the American Educational Research Association, Toronto, 1978. 31p. Available ERIC. ED 159 056.

Teacher behavior associated with effective mathematics instruction in elementary schools had earlier been characterized and translated into an instructional program. Key instructional behaviors identified were: daily review, development, seatwork, homework assignment, and special reviews. A vigorous test of this program was undertaken using 40 fourth-grade classroom teachers. Teacher effectiveness was measured by student gains on scores on a standardized achievement test. The performance of the treatment group significantly exceeded the performance of the control group. A complete analysis is reported.

118. Good, Thomas L. Teaching Mathematics in Elementary Schools. Educational Horizons, v57 n4 p178-82 Sum 1979.

In this series of studies, successful teaching practices in mathematics were identified through naturalistic study and an in-service program and model mathematics lesson developed. The in-service training, tested with 40 volunteer teachers in an urban school district, was effective in increasing student mathematics achievement.

*119. Good, Thomas L., and Douglas A. Grouws. The Missouri Mathematics Effectiveness Project: An Experimental Study in Fourth-Grade Classrooms. Journal of Educational Psychology, v71 n3 p355-62 Jun 1979.

The effectiveness of an experimental mathematics teaching program was investigated. Observational measures revealed that teachers implemented the treatment. Analyses of product data showed that students of treatment teachers outperformed those of controls. Thus, teachers and/or teaching methods exerted a significant difference on student progress in mathematics.

*120. Good, Thomas L., and Douglas A. Grouws. Teaching and Mathematics Learning. Educational Leadership, v37 n1 p39-40, 42-45 Oct 1979.

Student learning in elementary mathematics can be increased by some key teacher behaviors identified by research.

*121. Good, Thomas L., and Terrill M. Beckerman. An Examination of Teachers' Effects on High, Middle, and Low Aptitude Students' Performance on a Standardized Achievement Test. American Educational Research Journal, v15 n3 p477-82 Sum 1978.

Teacher effectiveness was defined by students' mathematics score on the Iowa Test of Basic Skills while achievement was measured by the Cognitive Abilities Test. Relatively effective teachers generally produced achievement gains from all aptitude levels. Similarly, relatively ineffective teachers did not disproportionately depress achievement for any level of student aptitude.

*122. Good, Thomas L., and others. Teachers Make a Difference. New York: Holt, Rinehart and Winston, 1975. 271p. Not available ERIC. ED 104 863.

This 10-chapter book discusses the research process and how it can be used to improve educational practice. The assumption is made that schools can and do make a difference in the educational progress of students, and that research data can be used to improve educational practice. Important current educational topics are also presented. These topics are concerned with demonstrating that teachers are a critical factor in the success of any educational practice, and with illustrating the role and integration of research findings in educational practice. Chapters include the following: (a) "Schools, Teachers, and the Effects of Education;" (b) "Schools and the Critics;" (c) "Problems in Previous Research on Teachers and Schools;" (d) "Teachers Can Make a Difference;" (e) "Goals for Education;" (f) "Accountability;"

(g) "Criterion-Referenced Testing;" (h) "Individualization and Open Education;" (i) "Measuring Noncognitive Variables;" and (j) "Toward Effectiveness." An extensive bibliography is included.

123. Graham, George. Acquiring Teaching Skills in Physical Education. Journal of Physical Education and Recreation, v52 n4 p19-20 Apr 1981.

Teaching is comprised of a series of skills needed to produce successful lessons. Reinforcement, feedback, lecturing, observation, and demonstration represent only a few of the skills. The segue is an advanced teaching skill which involves modifying the lesson plan, resulting in renewed interest and elimination of off-task behavior.

124. Graham, George, and Elsa Heimerer. Research on Teacher Effectiveness: A Summary with Implications for Teaching. Quest, v33 n1 p14-25 1981.

Research on teaching has begun to yield important distinctions between the teaching performances of more effective and less effective teachers. More effective teachers are shown to use a wide variety of teaching behaviors at appropriate times. Teaching behaviors comprising Direct Instruction are most effective for keeping students on task.

*125. Grannis, Joseph C. Task Engagement and the Consistency of Pedagogical Controls: An Ecological Study of Differently Structured Classroom Settings. Curriculum Inquiry,v8 n1 p3-36 Spr 1978.

An ethnographic depiction of the regularities of classroom instruction and an understanding of the student intent and response in such settings provide a perspective on both project Follow Through and the problem of task engagement.

*126. Gray, J., and D. Satterly. Formal or Informal? A Re-Assessment of the British Evidence. British Journal of Educational Psychology, v51 n2 p187-96 Jun 1981.

Prompted by recent reanalysis of data from "Teaching Styles and Pupil Progress" (Bennett, 1976), the authors consider whether there is an overall trend in British evidence favoring formal or informal teaching styles and whether this dichotomy is important to future studies of teacher effectiveness.

*127. Green, Judith L., and Deborah Smith. Teaching and Learning: A Linguistic Perspective. Elementary School Journal, v83 n4 p353-91 Mar 1983.

Briefly discusses factors involved in conceptualizing teaching and learning as linguistic processes, providing an overview of methodological approaches emerging in the literature and presenting selective findings on the nature of teaching and learning processes from both teachers' and students' perspectives.

**128. Griffin, Gary A. Effectiveness Research and Teacher Education: Yesterday, Today, and Tomorrow. Austin: Texas Univ. Research and Development Center for Teacher Education, 1981. 19p. Available ERIC. ED 209 176.

Educational research is not having the impact on teaching practice that it could and should be having. In the past fifteen years, a four-tier pattern has emerged, with each tier more complex and revealing than the one before. Earlier researchers focused on description and differentiation in their studies, building a body of knowledge that could be tested and validated. After placing values on the findings, practice is altered, and improvement is sought. However, difficulties have arisen due to the lack of a comprehensive and systematic view of how research findings can and should be used to influence change. Recently, educational researchers have moved toward strengthening the understanding of process-product relationships, making it easier to use and apply research results. Teacher educators should make sure that prospective teachers not only know the terrain of teaching and learning (product), but also know about it (process). In order to make the best use of research findings, teachers must conceive of and support appropriate delivery systems and take research utilization beyond edict, policy, and entreaty.

**129. Griffin, William A., Jr. How Instructors Demotivate the American Indian Community College Student. A Report of a Survey at Nebraska Indian Community College, Macy Campus, 1980-1981. 1982. 8p. Available ERIC. ED 213 565.

During the fall of 1980, 83 students at Nebraska Indian Community College (Macy Campus) completed a survey to identify the key behaviors of community college instructors that demotivate American Indian community college students. Students were given a questionnaire, developed by Dr. James O. Hammons (University of Arkansas), listing 32 items that Dr. Hammons had collected from students over the past 10 years; three blank spaces were provided for listing demotivators not already included. Students were instructed to include their elementary, secondary, and college instructional experiences. The top 10 items tabulated and recorded were: talking down to or ridiculing students;

showing disinterest in students and their views and problems; asking for questions but never answering them; failing to return assignments or returning tests and other material weeks after the material was turned in; using concepts and classification categories which students had never heard of; playing favorites; grading unfairly; coming to class late or unprepared; and using the lecture method exclusively. As a result of the survey, a slide-tape program for use with new faculty was written and produced at the college during the spring and summer terms.

**130. Gurin, Patricia, and Betty Mae Morrison. Two-Way Socialization Processes in the Classroom. Final Report. Ann Arbor: Michigan Univ. Institute for Social Research, 1980. 136p. Available ERIC. ED 198 194.

A study was conducted in thirty-four sixth grade classrooms in order to examine (1) the effect of teacher behavior on pupil achievement and feelings of control; (2) how pupil characteristics affect teachers' differential behaviors toward different pupils; (3) how the effect of teachers' behaviors on pupils varies according to pupil characteristics; and (4) how changes in pupils' attitudes and expectancies mediate their changes in academic performance. Included in this report are the results of pupil achievement and personality tests (administered three times during the school year) and data from coded observations of teacher pupil interaction. The sample of pupils for which data are analyzed included black and white children of both sexes and different levels of internal and external control. Results are presented in separate chapters on teacher judgments of children, teacher behaviors, the relationship between teacher judgment and behavior, and teacher locus of control. This study also highlights ways that teacher behaviors and pupil characteristics may interact to hinder rather than to facilitate a pupil's learning.

**131. Guskey, Thomas R., and John Q. Easton. The Characteristics of Very Effective Teachers in Urban Community Colleges. Paper presented at the annual meeting of the Eastern Educational Research Association, West Palm Beach, 1982. 17p. Available ERIC. ED 213 476.

An exploratory study was conducted to identify the characteristics and behaviors related to effective instruction in an urban community college. The 30 instructors selected for the study taught introductory courses in biology, English, mathematics, or social sciences at the City Colleges of Chicago. All had exceptionally high levels of student achievement and low levels of student attrition in these classes and had been identified as exemplary instructors by their academic dean. Structured interviews were conducted with 28 instructors who provided information on personal background; course planning and organization;

positive regard for students; use of teaching strategies to foster student participation; and degree and type of feedback, correction, and reinforcement given to students. The study revealed that these exemplary teachers shared many common teaching characteristics and instructional practices, regardless of their academic discipline, age, or experience. Effective teachers were generally well organized and very systematic in their teaching. Although they used primarily whole-group instruction, the teachers emphasized student participation in class. These teachers provided regular and specific feedback on student learning progress and had a high positive regard for their students, which they communicated by learning students' names and encouraging individual conferences. The study report details methodology, limitations, and findings and includes the survey instrument.

*132. Gusthart, L. What Do We Know About What We Do? Research on Teacher Effectiveness. Saskatchewan Educational Administrator, v14 n4 p19-26 Sum'82.

The author reviews the findings of some of the major studies of teaching and suggests that teacher education programs need to be continually examined and validated against the research findings.

133. Guthrie, John. Research Views: Teacher Effectiveness: The Quest for Refinement. Reading Teacher, v35 n5 p636-38 Feb 1982.

Reports that research in the field of teacher effectiveness is difficult because so many areas associated with it have not been analyzed.

*134. Guthrie, John T. Research Views: Effective Teaching Practices. Reading Teacher, v35 n6 p766-68 Mar 1982.

Reviews research showing that teachers can improve student reading behaviors through direct instruction and reinforcement.

*135. Hacker, R.G., and others. A Cross-Cultural Study of Science Classroom Interactions. British Journal of Educational Psychology, v49 pt1 p51-59 Feb 1979.

A British observational study of science classroom interactions was replicated in Atlantic Canada with 33 teacher-class units. Comparison of results revealed a less practical approach to science teaching in the Canadian classrooms, with greater emphasis on the informational aspects of science and convergent, problem-solving activities.

*136. Haertel, Geneva D., and others. Psychological Models of Educational Performance: A Theoretical Synthesis of Constructs. Review of Educational Research, v53 n1 p75-91 Spr 1983.

This review compares and contrasts eight instructional models presenting holistic conceptions of student learning in classroom settings. Major constructs posited by different theorists are cross-tabulated and related to factors of the model of educational productivity.

**137. Hansen, J. Merrell. The Emerging Science of Teaching: Cutting the Gordian Knot. 1979. 17p. Available ERIC. ED 175 813.

The direction teacher education will take depends upon careful examination of the processes and activities that affect teacher behavior and on meticulous re-definition of the skills, attitudes, and knowledge that contribute to teaching effectiveness. The restrictions of educational bureaucracy and the perpetually changing demands of educational research have led to general criticism of the teacher's role, function, and value in society. Teachers, teacher critics, and educational researchers must persevere in the examination of the research being conducted in teacher effectiveness, and must operate with full knowledge of the intrinsic vagueness and inconsistency involved in attempting to compose formal and universally applicable teaching strategies.

138. Hansen, J. Merrell. School Effectiveness = Teacher Effectiveness. High School Journal, v64 n5 p222-26 Feb 1981.

The author asserts that effective teachers are far more critical to school effectiveness than innovations in school organization, facilities, or curriculum. He reviews some studies on the characteristics of effective teachers to suggest criteria for identifying and evaluating effective teachers. He urges schools to invest in teacher proficiency.

*139. Harootunian, Berj. Teacher Effectiveness: The View from Within. Theory into Practice, v19 n4 p266-70 Fall 1980.

Until recently, teacher behaviors as conceptualized by educational researchers were not consistent with teachers' own views of effective teaching. Explicit attention has to be devoted to the characteristics of the teacher so that changes or adoptions of new procedures will be congruent with the teacher's own ideas and attitudes.

140. Hautala, Lynda M., and George E. Mason. In Search of Success. Southern Journal of Educational Research, v12 n4 p235-48 Fall 1978.

Classroom behaviors of 24 primary reading teachers

whose students averaged 1.27 academic years gain per 8 months instruction over the past 3-5 years were observed. Results indicated that, while many of the demonstrated behaviors adhered to advocated practices, several of their behaviors have been strongly criticized in the literature.

**141. Heinrichs, Audrey S., and Eui-Do Rim. A Survey of Classroom Practices in Reading: Reports of First, Third, Fourth, and Sixth Grade Teachers in Delaware, New Jersey, and Pennsylvania. Philadelphia, Pa.: Research for Better Schools Inc., 1980. 156p. Available ERIC. ED 192 297.

Limited to first, third, fourth, and sixth grade teachers within the tri-state area of Delaware, New Jersey, and Pennsylvania, this survey examined (1) what teachers did when they taught reading, (2) the materials they used, (3) who made decisions about instructional processes, and (4) the bases they used. The responses are reported in terms of four classroom process constructs: "Opportunity" (encompasses variables related to the time available for students to learn curriculum content); "motivators" (covers variables that support and enhance student learning, both curriculum variables and nonacademic interaction among people in the classroom); "structure and place" (includes the clarity and specificity of curriculum objects, the frequency with which new objectives are presented, and the relationships between the curriculum materials and the stated curriculum objectives; and the placement of students into appropriate levels of the curriculum, sequencing and pacing, and grouping patterns); and "instructional events" (subsumes mechanisms and methods for connecting the learners with the feedback that is needed to implement their progress toward the desired competency).

**142. Henderson, Carlesta. Musical Accountability: The Measurement of Music Teacher Behaviors. Accentuating the Positive. 1974. 10p. Available ERIC. ED 171 637.

Addressing the need for effective teaching and accountability in music instruction, this document describes a study of an inservice project to train teachers in the use of consistent verbal and nonverbal behaviors. The project involved 27 music teachers in the inner city, multiracial community of East Harlem in New York City. The workshop sessions included a discussion of classroom management techniques; procedures for using the measurement instrument; and the observation, identification, and evaluation of specific teacher performances in classroom activities. Pre- and post-training classroom sessions were videotaped. Results indicated that after training, teachers became more aware of their behaviors in relation to classroom interaction. Workshop participants were able to pinpoint areas of academic and social teaching inconsistencies and were able to take steps to correct them. Those teachers who maintained

the greatest percentage of consistency found that classroom disruptiveness was reduced and more attention was paid to academics. The use of videotapes was considered valuable in that teachers were able to identify their own behaviors.

*143. Hess, Robert D., and others. Some Contrasts between Mothers and Preschool Teachers in Interaction with 4-year-old Children. American Educational Research Journal, v16 n3 p307-16 Sum 1979.

Sixty-six mothers and 34 preschool teachers were compared on two types of adult-child interaction. Although both groups were similar on some tasks, mothers asked for more responses, made more direct requests and commands, and gave more explicit and corrective feedback following children's errors.

144. Hickman, Janet. Extending the Dimensions of Research in Response to Literature: Response in an Elementary School Setting. 1980. 29p. Available ERIC. ED 189 600.

An ethnographic study of children's response to literature at a range of developmental levels and in a variety of natural classroom contexts involved comprehensive classroom observations of 90 children aged five to eleven years representing a range of abilities. Data were collected during a four-month period on daily log sheets, then later classified into (1) listening behaviors, (2) contact with books, (3) acting on the impulse to share, (4) oral responses, (5) actions and drama, (6) making things, and (7) writing. Examples of students' responses were compared according to age level differences, and teacher strategies of manipulating contextual settings were categorized. Among the connections identified from the data were that the direct accessibility of a book seemed to be of primary importance in children's willingness to express any response to it at all, and that the most powerful feature of classroom contexts was their manipulation by teachers.

*145. Hildyard, Angel. Classroom Environment. Reporting Classroom Research, v11 n3 p6 Sep-Oct'82.

This article describes the ongoing study entitled "The IEA Classroom Environment Study: Teaching for Learning". The study is funded by the Ministry of Education and is being conducted by the Ontario Institute for Studies in Education. The purpose of the study is to correlate student outcomes with the following variables: (1) contextual measures, (2) instructional events and practices, (3) managerial events and practices, and (4) student learning processes. Data are being collected through questionnaires, interviews and classroom observation. The study involves 50 Ontario teachers of Grade 8 mathematics and English.

*146. Hogben, Donald. Research on Teaching, Teaching, and Teacher Training. Australian Journal of Education, v24 n1 p56-66 Mar'80.

Research on teaching, conducted over many years largely from within the process-product paradigm, has contributed few generalizations either to guide teachers directly, or indirectly through its influence on the content of teacher education programs. Alternative paradigms which recognize as basic the complexity and ambiguity inherent in classroom environments, and the fact that students are active agents in their own learning, appear to show more promise for the future and are likely to be more meaningful and relevant to practising teachers. Research involving practising teachers, teacher-trainees, and educational researchers working together on projects carefully articulated with professional courses is proposed as offering more promise for the future than a continuation of the search for generalizations from research on teaching conducted within the process-product paradigm.

*147. Holmes, Mark. The Impact of Educational Research. Education Canada, v21 n4 p22-29 Win 1981.

Discusses factors revealed by educational research that improve student learning and over which administrators and trustees have some control: school atmosphere and instructional time. Offers 14 steps for implementing research findings into educational innovations.

**148. Huitt, William G., and John K. Segars. Characteristics of Effective Classrooms. Philadelphia, Pa.: Research for Better Schools, Inc., 1980. 32p. Available ERIC. ED 207 216.

A review of research and proposed models on classroom processes allows identification of four key characteristics of effective classrooms in elementary and secondary education. The four characteristics encompass (1) teacher attention to student characteristics, including prior learning and learning styles; (2) congruence among the course goals, what the teacher teaches, and the knowledge and skills assessed by test instruments; (3) the amount of student engaged time; and (4) the degree of success a student experiences on educational tasks during the school day. Three models that synthesize research on effective classrooms and instructional methods illustrate different ways the four characteristics can be applied in classroom instruction. The models include Rosenshine's "direct instruction" model, Bloom's "mastery learning" model, and a model developed at Pittsburgh's Learning Research and Development Center emphasizing classroom opportunity, motivators, structure, and instructional events. Linking the four characteristics to other aspects of schools and classrooms, such as curriculum development or classroom management, suggests that these characteristics can be used to improve instruction, teacher supervision and support, and inservice training.

**149. Huitt, William G., and others. Monitoring and Evaluating the Critical Dimensions of Effective Classrooms. Philadelphia, Pa.: Research for Better Schools, Inc., 1982. 22p. Paper presented at the Annual Meeting of the American Educational Research Association, New York, 1982. Available ERIC. ED 221 597.

Methods and procedures were developed for monitoring and evaluating classrooms on critical dimensions derived from process-product research. The evaluation process for each of these student behaviors, related to improving academic achievement, is described. The dimensions include student engaged time, which is a product of allocated time and engagement rate; content coverage, including prior learning and instructional overlap; and success rate, including such aspects of student academic success as success on daily work and success on topic tests. Procedures for evaluating the effectiveness of improvement strategies over time are described. A variables management strategy called the instructional improvement cycle was adopted to assist teachers and administrators in making decisions. This strategy assumes that student achievement is more likely to increase if classrooms are at appropriate levels on student engaged time, content coverage, and success rate. The necessity for formal data collection in monitoring critical student behaviors and in meeting requirements of accountability and effective performance is discussed.

150. Hummel-Rossi, Barbara. Aptitudes as Predictors of Achievement Moderated by Teacher Effect. New Directions for Testing and Measurement, n12 p59-86 Dec 1981.

Close monitoring and warm encouragement by teachers in a structured setting appear to provide the most conducive learning situation. Students' 8th- and 10th-grade performances are studied, measured by their aptitude and their treatment by teachers. Aptitude patterns vary markedly within teacher treatment.

*151. Inglis, Sidney A., ed. The BTES: What Makes the Difference? Thrust for Educational Leadership, v9 n4 p24-26 Mar 1980.

Describes the Beginning Teacher Evaluation Study, whose purpose was to identify classroom conditions and teaching activities that foster student learning in elementary schools.

*152. Johnson, David. W. Student-Student Interaction: The Neglected Variable in Education. Educational Researcher, v10 n1 p5-10 Jan 1981.

Discusses the necessity of student-student interactions for enhancing achievement, socialization, and healthy psychological development. Presents evidence concerning the

constructive impact of the appropriate use of cooperative, competitive, and individualistic goal structures and the power of effectively managed controversy within the classroom.

**153. Kluwin, Thomas N. Research on the Language of the English Classroom: A Disconnected Dream. Paper presented at the combined annual meeting of the Conference on English Education and the Secondary School English Conference, Pittsburgh, 1979. 18p. Available ERIC. ED 176 280.

Methods used in studies of the classroom language of the English teacher are described in this paper and some results of the research are reported. The paper first describes three methods traditionally employed in the description of the language of the English classroom--live observation systems, coding systems based on transcripts, and ethnographic studies--and indicates which of these methods was used in each of 22 studies. It next characterizes the studies (and two additional studies) according to five types of research designs outlined by M.J. Dunkin and B.J. Biddle: process occurrence, presage-process, context-process, process-process, and process-product. The paper then reports some of the results of the studies, concluding that the findings suggest that English teachers make their classrooms into very dull places, and notes that the findings do not yield much information about the effects of teacher training on the beginning English teacher. It concludes by stating some assumptions about what research should be and by stating that future research studies into the training of English teachers should be holistic and longitudinal, should investigate the process of how teachers learn to think like teachers, should reflect the divisions of the field of English teaching, and should focus on the language of the classroom.

154. Kremer, Lya. Locus of Control, Attitudes toward Education, and Teaching Behaviors. Scandinavian Journal of Educational Research, v26 n1 p1-11 1982.

Tests 191 elementary school teachers in northern Israel for the relationships among locus of control, traditional and progressive educational attitudes, and related teaching behaviors. Finds external and internal locus of control explain the variance in traditional and progressive attitudes, respectively, and teaching behaviors.

**155. Kugle, C.L. Data Collection Procedures for the Evaluation of Teaching Program, Phase II. Technical Report No. 5055. Austin: Texas Univ. Research and Development Center for Teacher Education, 1978. 48p. Available ERIC. ED 170 340.

As part of an ongoing investigation of the relationship between teacher behavior and pupil affective and

cognitive outcomes, coders practiced recording their observations of existing classroom videotapes in order to determine the amount of interobserver agreement. The videotapes were coded, using seven existing low- to medium-inference classroom observation systems. All coders coded three reliability tapes prior to coding 36 test tapes. The systems used to code the videotapes were the Spaulding Teacher Activity Rating Schedule; Teacher-Child Dyadic Interaction System (Brophy-Good); Observation Schedule and Record Form; Flanders System of Interaction Analysis; Florida Climate and Control Systems; CERLI Verbal-Behavior Classification System; and Classroom Communication Observational Categories. Data on encoding, using two high-inference measures, the Classroom Observation Scales and Teacher Evaluation Scale, were also collected. Tables showing interobserver agreement on the 36 videotapes and coding directions for the observation instruments are appended.

**156. Kugle, C.L., and R.O. Clements. One Good Look Deserves Another: Combining Methodologies to Describe Classrooms. Report No. 5084. Austin: Texas Univ. Research and Development Center for Teacher Education, 1980. 189p. Available ERIC. ED 192 293.

Qualitative and quantitative methodology in classroom observation were combined in this study that examined nine second grade reading classes. Each classroom was observed by an ethnographer and a classroom coder ten times throughout the year, and each observation lasted 90 minutes. For each classroom, four of the ten observations were also videotaped. The classroom observation system used was that developed by the Stanford Research Institute for use in the evaluation of the National Follow Through programs. Of particular interest in this observation system is the Five Minute Observation, which records classroom interactions in "frames" completed four times per hour. Four codes comprise each frame, indicating who performed the action, to whom it was directed, and what was done. Results indicate that some type of narrative record, or series of interviews, always be used in conjunction with categorical observation systems.

**157. Kyle, William C., Jr., and others. Science Laboratory Interaction Categories (SLIC): An Instrument to Observe and Analyze the Various Parameters of Activity-Centered and Vocational Education Classrooms. Technical Report 15. Iowa City: Iowa Univ. Science Education Center, 1978. 55p. Available ERIC. ED 166 061.

An instrument is presented for recording and analyzing student and teacher behavior in laboratory or activity-centered vocational education classrooms. The instrument uses categories of behavior, such as: (1) asks extended thought questions, (2) shows or illustrates, and (3)

management of lesson, for teachers; and categories such as: (1) asks questions, (2) reads lesson-related material, and (3) gets supplies or moves around the room, for student behavior. The categories are recorded using single-letter codes, along with codes to indicate to whom the behavior is being directed and the sex of the person to whom the behavior is being directed. This document describes the development and validation of the instrument, and gives descriptions of and rules for use of the categories.

158. Kyriacou, Chris, and Graham Newson. Teacher Effectiveness: A Consideration of Research Problems. Educational Review, v34 n1 p3-12 Feb 1982.

The shortcomings of the three main approaches to measuring teacher effectiveness (systematic observation, participant observation, and questionnaires) are discussed and problems of research design and analysis considered. The development of better measures of educational benefits to complement the emphasis on test scores is suggested.

*159. Lanier, Judith E. Research on Teaching: A Dynamic Area of Inquiry. Occasional Paper No. 7. East Lansing: Michigan State Univ. Institute for Research on Teaching, 1978. 21p. Available ERIC. ED 162 983.

Research on teaching, encompassing those judgments and actions of teaching that can affect the curriculum and instruction that learners encounter in school, is a necessity if public school personnel are to cope with the increased social pressures on the schools. Early empirical research in the field focused on teachers or learning, rather than on teaching. In the 1950's and 60's, however, a new approach emerged involving classroom observations of teaching. Often this research could determine no direct relations between teacher behavior and student learning. Current research efforts are involved with increasingly complex research that not only addresses teaching behaviors but also teacher thinking during instruction and instructional design. What constitutes effective teaching differs as a function of variations in teachers, learners, resources, and the school and community environment, and research must in the end seek out regularities among these many complex parts.

*160. Lanier, Judith E., and Sally Glassberg. Relating Research in Classroom Teaching to Inservice Education. Journal of Research and Development in Education, v14 n2 p22-33 Win 1981.

A series of steps needs to be taken in preparing for research-based inservice programs: training individuals to assume the role of facilitators of inquiry; developing

materials and strategies for working with classroom teachers; developing appropriate evaluation procedures; and structuring opportunities to bring together the researchers and teachers.

*161. Levin, Tamar, and Ruth Long. Effective Instruction. Alexandria, Va.: Association for Supervision and Curriculum Development, 1981. 113p. Available ERIC. ED 200 572. Microfiche only.

The purpose of this book is to share successful instructional and learning processes with educators. The focus is on three types of variables in classroom learning and instruction: (1) active learning time; (2) feedback and corrective procedures; and (3) instructional cues. The literature on the nature of each variable is discussed, and the conditions for successful implementation, the reasons for their powerful effects on learning, and the different ways they can be used are outlined. A section on evaluating instruction examines the roles of classroom observation, rating scales, student questionnaires, content analysis and techniques for self examination. A review of the implications arising from new demands on the educational system cites the classroom climate and the concept of individual differences as major areas that need research. An annotated bibliography of research articles written since 1960 emphasizes the feasibility of implementing the ideas discussed in the book.

**162. Locke, Lawrence F. Teaching and Learning Processes in Physical Activity: The Central Problem of Sport Pedagogy. 1979. 20p. Available ERIC. ED 171 700.

The use of an established research method, Research on Teacher Effectiveness (RTE), is considered as it may be applied to examine successful teaching methods in physical activities and sports. The basic process of RTE is observing teachers at work with students in the classroom or gymnasium. Research on the relationship between teaching behaviors and methods and student achievement in physical activities has, in the past, been limited. Conclusions on teacher effectiveness reached by the RTE process are discussed as they apply to academic achievement, and projection is made on their validity when considered in the area of physical achievement.

**163. Lorentz, Jeffrey L. Methodological Considerations in Teacher Effectiveness Research. Paper presented at the conference of the Southeastern Regional Association of Teacher Educators, Biloxi, Mississippi, 1978. 20p. Available ERIC. ED 166 249.

The Carroll County (Georgia) Competency-Based Teacher Certification Project developed a measure of teacher effectiveness, the 341-item Georgia Assessment of Teacher Effectiveness, based upon five previously published classroom observation systems. Three concerns were drawn from

the development of this instrument: (1) the reduction of observational data to meaningful units for later analysis; (2) the scoring of these data to produce reliable indices of teacher behavior, and the provision for meaningful feedback in the form of behavioral profiles; and (3) the use of discriminant analysis to contrast a priori groups of teachers on the behavioral indices. The data were recorded by observers and keypunched to be transcribed to machine-readable form. Flexibility, ease of transcription, and compactness were useful characteristics of this process. The observers coded teacher behavior according to low-inference rating processes. The computer program then provided scores for behaviors which were already determined to be indicators of effective teaching. It provided functions for data aggregation, scoring of keys, estimation of reliability, and provision of profiles of each classroom. Discriminant analysis was used to compare the results for three groups of teachers (metropolitan, small town, and rural) and two groups of student teachers (from urban and rural universities). The two groups of student teachers were most extreme in their differences.

**164. Lorentz, Jeffrey L., and Homer Coker. Empirically Derived Dimensions of Classroom Behavior As Predictors of Student Achievement. Paper presented at the annual meeting of the American Educational Research Association, Boston, 1980. 11p. Available ERIC. ED 186 490.

Thirteen of the 41 classroom observation dimensions derived from Medley's review of teacher effectiveness reports were scored on the Georgia Assessment of Teacher Effectiveness. Subjects were 53 fifth and sixth grade teachers in language arts and mathematics. The dimensions were: large group instruction; group size without adult supervision; student seatwork, teacher structuring, student choice; structured academic time; student verbal interaction; correct substantive responses to teacher questions; low cognitive level questions; teacher discusses student response; teacher hostility and rebuking behavior; disruptive student behavior; student time on task; non-substantive teacher-student interaction; and structured student behavior. The contribution of each dimension to spring-term student achievement on the Iowa Tests of Basic Skills (ITBS) was calculated, after eliminating variance attributed to the fall-term pretest, grade level, and socioeconomic status. All dimensions were significantly related to at least one of five ITBS subtests: vocabulary, reading, spelling, mathematics concepts, or mathematics problems.

**165. Lorentz, Jeffrey L., and others. The Georgia Assessment of Teacher Effectiveness (GATE) as a Predictor of Reading Achievement. Paper presented at the annual meeting of the National Reading Conference, St. Petersburg, 1978. 21p. Available ERIC. ED 169 075.

In a study of the relationship between teacher behavior

and reading achievement, trained observers, using the Georgia Assessment of Teacher Effectiveness (GATE), observed 36 teachers and 820 students in grades five and six. The Iowa Tests of Basic Skills, Reading Comprehension subtest was administered and the socioeconomic status of each student was estimated. The observers visited each classroom six times and obtained a total of 12 GATE records for each classroom. Observable behaviors were recorded, based on 314 GATE items, which were adapted from five existing classroom observation instruments. The GATE has two parts: (1) observable student and teacher behavior, and (2) observable student and/or teaching cognitive and affective behaviors and teaching strategies. Results of the study indicated that: (1) 13 of 15 dimensions found to be indicative of effective teaching in a separate study can be measured by the GATE; (2) six of the dimensions are significant predictors of reading achievement in 36 classrooms; and (3) statements derived from the effective teaching study were supported.

**166. Low, Lana, and Lee M. Wolfle. Enduring Effects of First-Grade Teachers on Achievement. Paper presented at the annual meeting of the American Educational Research Association, Los Angeles, 1981. 26p. Available ERIC. ED 201 387.

The long-term influence of effective first-grade teachers on their students was examined in this study. Subjects were about 200 students enrolled in the classes of nine first-grade teachers in 1974-1975. During that year and each of the four succeeding years, the students were administered SRA achievement tests in the fall and in the spring. One first-grade teacher (teacher #8) was identified as especially effective because of the superior achievement gains of her students in the spring of the first year. Two analytical procedures were used to examine whether or not a subsample of 14 students of teacher #8 would continue to demonstrate superior achievements in comparison with matched subsamples from the other classes. The results indicate that the students of the effective first-grade teacher not only failed to continue their superior performance in subsequent elementary grades but performed worse than the students of the other eight first-grade teachers. Several possible explanations for this unexpected result are offered.

167. MacKay, A. The Effects of Practicum Experiences Upon Student Teachers' Use of Teaching Strategies: The 1979-80 Study. Edmonton: Centre for Research in Teaching. University of Alberta, 1980. 37p.

No annotation available.

168. MacKay, D.A. Project QUEST: Teaching Strategies and Pupil Achievement. Edmonton: Centre for Research in Teaching. University of Alberta, 1979. 51p.

No annotation available.

169. MacKay, D.A., and others. A Quasi-Experimental Study of the Effects of Training in Specific Teaching Skills. Staff Study. Unpublished paper. June, 1979. 35p.

This project was designed as a joint University of Alberta, Centre for Research in Teaching, and Edmonton Public School Board research study. The purpose of the project was to train classroom teachers in teaching skills and behaviours considered to be effective in achieving selected goals of classroom instruction and to measure the effects of this training on student performance in Language Arts and Mathematics. The sample consisted of approximately 30 Grade 3 teachers and 30 Grade 6 teachers. Teachers received workshops providing inservice education in specific teaching skills. Coders spent approximately 10 hours in each classroom collecting information on teacher and pupil behaviour.

170. Mahen, Robert. Students' Classroom Behaviors and Context, Product, and Teacher Process Variables. Edmonton: Centre for Research in Teaching, University of Alberta, 1980. 33p.

No annotation available.

**171. Malitz, David, and others. Integrating Quantitative and Ethnographic Methods to Describe the Classroom. Report No. 5083. Paper presented at the annual meeting of the American Educational Research Association, Boston, 1980. 74p. Available ERIC. ED 192 447.

The debate between proponents of ethnographic and quantitative methodology in classroom observation is reviewed, and the respective strengths and weaknesses of the two approaches are discussed. These methodologies are directly compared in a study that conducted simultaneous ethnographic and quantitative observations on nine classrooms. It is concluded that inferences about classroom processes are best made using quantitative methodology, but that ethnography is a very useful adjunct for purposes such as generating hypotheses and pilot testing quantitative instrumentation.

*172. Manitoba Educational Research Council. Looking Into Classrooms. Winnipeg: the Council, 1979. 24p.

This report briefly summarizes some findings of research on teaching and outlines the views held by a number of Manitoba

educators concerning issues which should constitute priorities for future research. The report then recommends means of encouraging greater participation in the conduct of classroom research and of achieving more effective dissemination and application of research results.

**173. Martin, Jeanne. Differences in Teacher-Student Interactions Within Reading Groups. Austin: Texas Univ. Research and Development Center for Teacher Education, 1979. 28p. Available ERIC. ED 188 128.

Data on 17 first grade teachers and 305 students in 45 reading groups were used to examine the relationships between teacher behaviors, their classification of their students, and student reading achievement. The teachers were asked to rank their students on six characteristics: confidence, obedience, extroversion, good seatwork habits, teacher liking, and teacher concern for the student. These teacher ratings were compared to teacher behaviors during one school year. Additional analyses were used to determine the relationship between teacher ratings and student reading achievement, using reading test scores at the beginning and end of the school year. Students with the characteristics of obedience, good seatwork habits, and teacher liking answered more questions correctly and called out answers less often than disobedient students with poor seatwork habits. Teachers provided more response opportunities, criticism, and terminating feedback to disobedient students with poor seatwork habits, and fewer response opportunities, less criticism and less terminating feedback to obedient students with good seatwork habits. Five of the teacher ratings of students were consistently related to student achievement. Teacher concern was negatively related to achievement, while obedience, good seatwork habits, teacher liking, and confidence were positively related to student achievement. Student extroversion was not related to achievement.

**174. Martin, Jeanne, and Carolyn M. Evertson. Multilevel Analyses of Teacher-Student Relationships in Junior High Classrooms. Paper presented at the annual meeting of the American Educational Research Association, Los Angeles, 1981. 25p. Available ERIC. ED 208 041.

Classroom behaviors from the Texas Junior High School Study were related to achievement using both class means and student scores within classes as the units of analysis. Behaviors significantly related to achievement at the class level of analysis were not related to achievement within the class and vice versa. There was no clear pattern of significant relationships at the class level of analysis. However, significant within-class relationships did form a pattern indicating that students who were not as successful academically as other students in the class with

similar entering ability, tended to act differently in the classroom and were treated differently by the teacher. Several explanations were offered for this pattern of teacher-student interactions occurring within classes. It was concluded that results obtained at one level of analysis cannot be generalized to other levels. Therefore, it is important that multilevel classroom data be analyzed at both the class and student within class levels to develop a more thorough understanding of the relation of classroom processes to student achievement.

**175. Martin, Jeanne, and Carolyn M. Evertson. Teachers' Interactions with Reading Groups of Differing Ability Levels. Austin: Texas Univ. Research and Development Center for Teacher Education, 1980. 30p. Available ERIC. ED 203 303.

A study was conducted to determine (1) if teachers treated differing ability reading groups within their classes differently, (2) if teacher behaviors affected mean group achievement, and (3) if so, if that effect was similar for both high and low achieving reading groups. The study involved 14 classes, 39 reading groups, and 277 students. The number of reading groups in each class varied from two to four, and the number of students in each reading group varied from four to thirteen. Classroom observers recorded academic interactions between teacher and student that were initiated by the teacher. The results showed that teachers used more nonvolunteer selection, preselection, and volunteer selection in lower ability reading groups than in higher ability groups. In addition, even though students in lower ability groups were reading on a lower level and answering more questions incorrectly than their peers in higher achieving groups, teachers praised them more often. Overall, teachers appeared to accommodate their behavior to the ability level of the reading group; however no significant relationship was found between teacher behaviors and student achievement.

**176. Martin, Jeanne, and Donald J. Veldman. Levels of Analysis in Teacher Effectiveness Research. Report No. 4075. Austin: Texas Univ. Research and Development Center for Teacher Education, 1979. 25p. Available ERIC. ED 176 239.

Data were collected in a teacher effectiveness study on the interaction of teachers and first grade students while the students participated in reading groups within intact classes. Eighteen teacher behavior variables drawn from the data were then related to student achievement using three units of analysis: class means, reading group means within classes, and student scores within reading groups. The results were then compared across the three sets of analyses. It was found that the pattern of results differed depending upon the unit used in the analyses. The relationships of teacher behaviors to student achievement

were frequently inconsistent across within-class and between-class analyses. Relationships that occurred at the class level of analysis did not always occur within classes, and relationships that occurred within classes at the student-within-reading-group level of analysis frequently did not occur at the reading-group-within-class or class levels of analysis. It was concluded that a combination of both within-class analyses and between-class analyses provided a better understanding of the relationship of teacher-student interactions to student achievement than did either within-class or between-class analysis alone.

**177. Martin, Jeanne, and others. The Unit of Analysis Problem in Teacher Effectiveness Research. Austin: Texas Univ. Research and Development Center for Teacher Education, 1979. 13p. Available ERIC. ED 174 621.

Although teacher effectiveness research has to date been primarily concerned with class level statistics, valuable information regarding a teacher's proficiency can be gleaned from the analysis of within class data. The relationships between teacher behavior and student achievement vary at the differing levels of analysis. Nine variable patterns of teacher behavior yield alternative response on more than three categorical levels: students within reading groups; reading groups within classes; and classes. Cross-group study of these levels, when compared with in-group study, provides information concerning not only the competency of the individual teacher but also the relativity of the individual student's achievement level to that student's social group. A synthesis of the two types of statistical analysis is necessary to obtain a comprehensive view of the dynamism between student-teacher interaction and student achievement.

*178. Martin, Jeanne, and others. Within-class Relationships between Student Achievement and Teacher Behaviors. American Educational Research Journal, v17 n4 p479-90 Win 1980.

Data collected on 25 ways teachers interact with first-grade students participating in reading groups within intact classrooms were analyzed with class mean analyses and two types of within-class analyses. A large number of statistically significant relationships occurred only at the student-within-reading-group level.

**179. Martin, Jeanne, and others. Within-Class Analyses of Relationships between Student Achievement and Teacher Behaviors. Paper presented at the annual meeting of the American Educational Research Association, Boston, 1980. 31p. Available ERIC. ED 190 671.

Data were collected in a teacher effectiveness study on the

interaction of teachers and first grade students while the students participated in reading groups within intact classrooms. The teacher behavior variables were then related to student achievement using three units of analysis: class means, reading group means within classes, and student scores within reading groups. Results revealed that relationships differed depending upon the level of the analysis. Particularly striking was the large number of significant relationships which occurred only at the student-within-reading- group level. Apparently, some variables took on different meanings in the correct context of a small group, implying that students were very much aware of and affected by their learning environment. The results demonstrate that a combination of within-class and between-class analyses provides a better understanding of the relationship of teacher-student interactions to student achievement than either within-class or between-class analyses alone.

**180. McConnell, John W., and Norman D. Bowers. A Comparison of High-Inference and Low-Inference Measures of Teacher Behaviors as Predictors of Pupil Attitudes and Achievements. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1979. 19p. Available ERIC. ED 171 780.

Data derived from a year-long study of 43 algebra classes in 13 high schools were collected to assess the differences between high-inference and low-inference measures of teacher behavior as predictors of pupil achievement and attitude change. The high-inference systems rated characteristics such as enthusiasm and clarity while low-inference measures were often frequency counts of objective, specific teaching acts. Student attitudes and achievement were measured at the beginning and end of the year. Achievement measures involved computation, comprehension, and analysis. Attitude measures included liking mathematics versus non-mathematics; mathematics fun versus dull; mathematics easy versus hard; and actual mathematics self concept. Results showed: (1) relationships of low- and high-inference measures to attitude and achievement measures were low; (2) low inference measures produced more significant correlation coefficients with achievement measures than did high-inference measures; (3) high-inference measures produced more significant correlation coefficients with attitude measures than did low-inference measures; and (4) correlations among low-inference measures and achievement measures were greater in magnitude than the correlations among high-inference measures and achievement measures. It was concluded that both types of observation instruments should be used in process-product research.

181. McDaniel, Thomas R. Criticism, Research, and Reform in Contemporary Education: The Search for "Significant Differences." Contemporary Education, v53 n1 p6-8 Fall 1981.

Numerous criticisms have been directed at the effectiveness of the American public school system. Recent research on teaching effectiveness shows that teacher behavior and teaching style make an important difference to student learning. Proponents of educational reform should use research as a base for change.

**182. McEwin, C. Kenneth, and Julia Thomason. Increasing Effectiveness in Middle Grades Schools. A Study of: Developmental Characteristics, Effective Teacher Competencies, Implications for Curriculum and Instruction. Monograph 3. Boone, N.C.: Appalachian State Univ. North Carolina League of Middle/Junior High Schools, 1982. 11p. Available ERIC. ED 212 086.

To assist the North Carolina League of Middle/Junior High Schools, this paper briefly surveys the literature on developmental characteristics of early adolescents and the characteristics of effective teachers and also discusses the implications of the findings for instruction and the curriculum. The authors first define early adolescence as the ages from 10 or 11 to 14 or 15 and then describe early adolescents' physical, social, emotional, and intellectual development, including the problems of exceptional adolescents. Their discussion of effective teachers and teaching techniques covers teacher expectations and other general characteristics; teacher self-esteem and leadership; classroom management skills; teacher-directed and student-initiated learning; and students' time on task. The paper's final section explores the implications for instruction and the curriculum both of the data gathered on adolescents and teachers and of theories of cognitive and ego development and developmental task sequences.

**183. McKnight, Philip C. Development of the Technical Skills of Teaching: 1968-1978 and Beyond. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1979. 35p. Available ERIC. ED 171 699.

Microteaching and the technical skills approach to teacher training began at Stanford University in 1963 as part of a preservice training program. The main skills that emerged from the program and were focused on from 1963-68 were response repertoire, creating student involvement, questioning skills, increasing student participation, and presentation skills. The second phase of the development of the technical skills approach can be characterized as a reexamination of the basic approach to the technical skills, along with the development of several new skills closely related to the examination idea. In the future, work must continue on development of an appropriate research paradigm.

184. Medley, Donald M. Future Directions for Process-Product Research. Journal of Classroom Interaction, v13 n1 p3-8 1977.

Suggestions are made for priority and strategy changes designed to make the process-product model for investigating effective teacher behaviors more productive.

185. Medley, Donald M. Research in Teacher Effectiveness -- Where It Is and How It Got Here. Journal of Classroom Interaction, v13 n2 p16-21 1978.

In discussing the past, present, and future of research in teacher effectiveness, this article notes that researchers' conceptions of teacher effectiveness have determined the nature of the research and the usefulness of the findings; process-product research can produce reliable information; the tools needed to build a knowledge base for effective teacher education and evaluation are available.

*186. Medley, Donald M., and Patricia R. Crook. Research in Teacher Competency and Teaching Tasks. Theory into Practice, v19 n4 p294-301 Fall 1980.

The central task of the teacher is to accomplish tasks that will result in pupil learning. Research on the effects that certain competencies have on teacher behavior and student academic achievement is needed.

*187. Medley, Donald M., and others. Assessing Teacher Performance from Observed Competency Indicators Defined by Classroom Teachers. Journal of Educational Research, v74 n4 p197-216 Mar-Apr 1981.

This study was concerned with the measurement of a set of indicators of teacher competence, defined by the teachers themselves as observable in their classroom behavior. It was concluded that keys could be constructed to yield stable and consistent measures of most indicators of competency.

188. Mehan, Hugh. The Structure of Classroom Events and Their Consequences for Student Performance. 1982. 27p. Not available ERIC. ED 216 557.

Questions about students' competence in classrooms are addressed in three parts: the suitability of ethnography as a research strategy, a summary of research that examines the social organization of classroom events, and the consequences of this organization for students' performance in the classroom. The discussion of methodology leads to the observation that the objective facts and subjective states associated with education, like those associated with other cultural domains, are interactional accomplishments. What students say and do to be judged effective by their peers and

teachers can be investigated by constitutive ethnographical methods examining the structure of classroom events. The studies reviewed take the perspective of the participants inside the classroom and concentrate on how the classroom is organized on a daily basis. Teacher-student interactions would seem to be rhythmic, cooperative activities involving complex coordination of speech and gesture. Interaction is segmented and, to some extent, controlled by systematic shifts in postures, conversational rhythms, and prosody. The configurations of interaction are shown to have practical consequences. Studies indicate that effective classroom participation involves the integration of academic content and interactional form.

*189. Michigan State University. Current Directions in Research on Teaching. Conference Series No. 1. East Lansing: Inst. for Research on Teaching, 1977. 88p. Available ERIC. ED 148 809.

This document contains four composite papers, developed from notes and tape recordings, and a collaborative writing effort, on the topics of "time," "context variables," "accumulating findings," and "outcome measures," as they apply to research on teaching. The discussions represented by these papers took place at a three-day conference of sixty-five leading scholars in research on teaching, gathered in an "invisible college." Discussions on "time" investigated conceptions of time in research on teaching, research-based facts about time, hypotheses about time, immediate implications for the practice of teaching, problems (philosophical, substantive, and methodological), and proposed solutions. "Context variables" were investigated from the view of the limits of content, and the concept of "context" from various perspectives (psychological, social psychological, and ecological). "Accumulating findings" sessions discussed problems in accumulating evidence, strategies for accumulating evidence, units of accumulation, issues in weighing evidence, and ways to plan for accumulating evidence. The sessions on "outcome measures" discussed an overview of current research on teacher effects and the problems involved in choosing and assessing outcomes as well as measuring change. Each of the sections contains a bibliography pertaining to the concept under discussion. A list of twenty-nine papers distributed among participants is presented. Appended are an evaluation of the meeting, a list of participants, and a conference schedule.

**190. Montague, William E., and others. After Years of Instructional Research Do We Know More than Grandma Did About How to Teach People? Paper presented at the annual meeting of the American Educational Research Association, Los Angeles, 1981. 38p. Available ERIC. ED 209 257.

Many articles have appeared in the educational,

instructional, and psychological literature questioning the adequacy of the technology available for devising instruction, and the usability of the instructional research literature as a source of the technology. A systematic planning model is a useful framework for organizing what has to be done to plan and develop instructional programs. It also provides a way of reviewing and summarizing available research to evaluate its usefulness for carrying out the tasks of instructional development. This systematic planning approach has changed substantially the way in which instruction is designed and developed in military organizations, and the way in which instruction is carried out. Researchers have been investigating how people process information and learn, with the long range intention of discovering techniques applicable to the development and delivery of instruction. Research is "relevant" if the tasks studied are chosen from tasks actually taught; or if it uses a detailed, intensive analysis of the task, and of the moment-by-moment behavior generated by subjects performing the task. Current research trends are emphasizing process analysis, and will result in more "relevant" research.

**191. Munroe, Mary Jeanne. Effective Teacher Behaviors as an Avenue to Enhance the Self-Esteem of Teachers. Paper presented at an Inservice held at Cholla High School, Tucson, 1982. 8p. Available ERIC. ED 228 162.

A discussion of how teachers perceive students and interact with them points out that one characteristic of an effective teacher is a high level of interactive skills. Selected teacher behaviors which enhance the quality of teacher-student contacts are discussed. It is emphasized that modeling desirable behavior is a primary responsibility for teachers at all levels, since this provides a basis for establishing a classroom climate of courtesy and trust. Within this framework, other teacher behaviors are considered, such as the critical skills of constructive questioning and creative listening. While these behaviors are essential, particularly in dealing with low achieving students, others are described as equally important. Consideration is given to the effective use of time and clarity of teacher presentation. Also identified as supportive teacher behaviors are immediate feedback and encouragement and modeling empathetic understanding. Consistency in these behaviors, regardless of the ability levels of the students, is identified as a hallmark of effective teaching.

**192. Munroe, Mary Jeanne. Teaching Behaviors Effective in Mainstream Classrooms. Paper presented at the Annual State Conference of the Arizona Federation Council for Exceptional Children, Tucson, 1982. 16p. Available ERIC. ED 213 679.

Acceptance of handicapped students by their peers is a major

component of success in the mainstreamed classroom. How teachers plan for interactions and lessons determines the degree to which social acceptance is achieved. The teacher's behavior models desired social acceptance, and the structure of learning activities evidences academic expectations. If the goal of successful mainstreaming is to be achieved, renewed emphasis must be made on what and how a teacher provides for both social and academic objectives. Good teaching has generic components appropriate for facilitating the learning of all children. Teaching behaviors supportive of social and academic integration in the regular classroom include: (1) structured time and a business-like climate; (2) questioning skills that aid understanding and problem solving and that evidence a sensitivity to student learning preference; (3) large group interaction patterns and supervision of small group work; (4) clear educational strategies that demonstrate a systematic approach and continuity in lesson development; (5) praise and encouragement; (6) use of accurate, prompt feedback; (7) performance standards and teacher expectations that emphasize learning and achievement; (8) use of structuring comments to bridge learning in a unified whole; (9) provision for self-paced, independent, and cooperative learning experiences; and (10) strategies which enhance the development of a realistic self-concept.

**193. Munroe, Mary Jeanne. Teaching Strategies for Effective Mainstreaming. Paper presented at the Conference of the Association for Supervision and Curriculum Development, Anaheim, 1982. 48p. Available ERIC. ED 213 705.

Meeting the needs of a wide range of student abilities in the classroom taxes the talents of educators. If mainstreaming is to be effective, interactions in the mainstreamed classroom should be supportive of students' learning abilities. Since they shoulder the major responsibility of effective mainstreaming, teachers need information and support in using new teaching styles and behaviors. Research studies on teacher attitudes, behaviors, and skills have resulted in findings that provide a model for successful classroom interactions. Some behaviors are easier to incorporate into teaching patterns than others, and allowances must be made for individual teaching styles. Questioning techniques, such as question level, probing, and expectation are important factors in providing supportive feedback to students. Other supportive strategies include monitoring individual class work and fostering constructive interactions among students in small groups, so that mainstreamed individuals can learn about themselves through the responses and reactions of others. A model, appended in chart form, delineates teacher behaviors that support motivating interactions. Fifteen teaching patterns are defined and examples are given of their use in the classroom. Instructional behaviors include learning involvement,

individual help, latency, probing, and questioning. Individual regard behaviors involve feedback, encouragement, listening, acceptance, and touching. In the category of managerial behaviors are monitoring, structuring comments, task orientation/expectation, transitions, and desist.

**194. Murnane, Richard J., and Barbara R. Phillips. Effective Teachers of Inner City Children: Who They Are and What They Do. 1978. 44p. Available ERIC. ED 166 348.

Investigated in this paper is the extent to which variables used in two major research approaches explain differences in the effectiveness of teachers in improving the vocabulary skills of inner city black children in four elementary grade levels. The two approaches investigated, educational production function research and process-product research, are described in terms of a multivariate model which takes into account teacher characteristics and other factors which affect children's achievement. Results of the study indicate that concepts used in both approaches provide indicators of teacher effectiveness. In particular, the general teaching approach known as direct instruction is described as being especially effective in teaching children from low income families. In addition, it is pointed out that teaching experience is related to teaching effectiveness. These findings are explained, their relationships discussed, and their implications for teacher training are outlined. A list of references is also included.

**195. Nasca, Donald, and Hilarie Bryce Davis. Verbal Interaction Behaviors of Teachers of the Gifted. 1981. 35p. Available ERIC. ED 216 478.

Trained and untrained teachers (N=37) of gifted students (grades 2 through 6) were observed and compared in the areas of individualization, cognitive quality of interaction, response patterns, and overall differentiation. Teachers were trained in applying B. Bloom's taxonomy to questioning techniques and in using management strategies for individualized instruction. As hypothesized, trained teachers used a greater variety of instructional patterns, asked more higher cognitive level questions and responded more facilitatively. Students in these classes gave more higher level responses and initiated interaction more often. Unexpected results included an indication that the most higher cognitive level activity occurs in small group settings. Results indicated that a teacher's qualifications for facilitative classroom interaction lie in use of a variety of grouping patterns, spontaneous use of higher level questions, and facilitative responding rather than correcting or praising comments.

**196. Natriello, Gary, and Sanford M. Dornbusch. Academic Instruction or Behavioral Control: An Experimental Study of Teacher Responses to Classroom Problems. Paper presented at the annual meeting of the American Educational Research Association, Boston, 1980. 24p. Available ERIC. ED 209 337.

An examination of teachers' responses to questionnaires identifying sixteen classroom academic and social behavior problems revealed different reactions to each type. A system was developed to measure the responses which were coded in terms of the extent to which they evidenced the presentation of standards or evidenced warmth. Teachers presented standards more frequently for social behavior than for academic work. This would seem to indicate teachers are more interested in behavioral control than in academic instruction. However, teachers react to academic problems with warmth and concern. Four factors influenced teacher behavior. These include teachers' conception of the student tasks, relative visibility of student tasks of classroom achievement and behavior, relative visibility of teaching task of academic instruction and behavioral control in school, and power of teachers' supervisors over them. Schools seem to supervise social behavior more closely than academic work. Student performance in academic areas is perceived as dependent on ability and effort, whereas behavior performance is seen as dependent primarily on effort. Several features of school organization are identified which cause schools to supervise social behavior more adequately than academic work.

**197. Natriello, Gary, and Sanford M. Dornbusch. The Stratification of Socialization Processes: A View from the Classroom. Paper presented at the annual meeting of the American Sociological Association, New York, 1980. 22p. Available ERIC. ED 207 874.

In this study, teachers were asked to complete questionnaires designed to determine how they handle 16 typical classroom problems concerning students' failures to conform to the academic achievement or social behavior norms of the school. In one form of the questionnaire, 156 teachers from 14 schools were presented with hypothetical profiles of student's ethnicity, sex, academic achievement record, and social behavior record. After reading the classroom problems and student profiles, teachers explained how they would respond to the problems, either by presenting to students standards of behavior and/or warmth. "Presentation of standards" refers to expectations, evaluations, and judgments made about both academic performance and behavior. "Warmth" means "expressions of personal concern." In the second form of the questionnaire, 168 teachers in 18 schools were presented with typical classroom problems and asked to select students at random from their roll books and to associate each with one of the specific classroom problems. Teachers were asked how they would respond in terms of warmth and presentation of standards if these students failed to

conform to a random selected school norm. It was hypothesized that teachers would be less warm and offer more standards to students with good behavior and high academic achievement and to students with poor behavior and high academic achievement teachers would respond with more warmth and less presentations of standards. The initial findings did not support the hypothesis. Among the findings are that teachers presented more standards to students with discrepant performance characteristics than to those with congruent performance characteristics.

**198. Nerenz, Anne G., and others. IGE Evaluation Phase IV: WDRSD Descriptive Study Final Report. Report from the Project on Evaluation of Practices in Individualized Schooling. Madison: Wisconsin Univ. Research and Development Center for Individualized Schooling, 1980. 148p. Available ERIC. ED 196 904.

Individually Guided Education (IGE) is a complex educational system intended to enable the elementary school to provide an environment where students learn at a rate and in a manner appropriate to their own learning styles. This descriptive study concerns the implementation of the Wisconsin Design for Reading Skill Development (WDRSD), an instructive management system which was created to be compatible with the IGE system. The WDRSD is an objective-based system that provides both structure and substance for an elementary school reading program. The focus is on developing the essential subskills of reading, which once acquired and applied enable students to read successfully. The WDRSD has four fundamental purposes: (1) to identify and describe instructional objectives for the skills which appear essential for competence in reading; (2) to assess individual pupils' skill development status; (3) to manage instruction of children with different skill development needs; and (4) to monitor each pupil's progress. Grades 2 and 5 participated at each school, and data were collected through tests on general objectives of the program, observations, teacher logs, and interviews. Profiles by school for each grade on means of instruction (pacing, grouping, materials, and interactions), time use (allocated, nonapplied, available, and engaged time), and achievement provide a basis for discussing the relationships among variables.

*199. Oliva, Peter F., and Kenneth T. Henson. What Are the Essential Generic Teaching Competencies? Theory into Practice, v19 n2 p117-21 Spr 1980.

This article details the attitudes, skills, and characteristics of an effective teacher. A list of 23 generic competencies in the areas of communication skills, basic knowledge, technical skills, interpersonal skills, and administrative skills is given.

*200. Ornstein, Allan C., and Daniel U. Levine. Teacher Behavior Research: Overview and Outlook. Phi Delta Kappan, v62 n8 p592-96 Apr 1981.

Discusses the problems and inconsistencies of teacher behavior research and the progress made in relating teacher behavior to classroom outcomes.

*201. Pedersen, Eigil, and others. A New Perspective on the Effects of First-Grade Teachers on Children's Subsequent Adult Status. Harvard Educational Review, v48 n1 p1-31. Feb 1978.

The relationship between teachers' attitudes and behavior and the subsequent adult status of sixty children was examined. The findings showed a positive correlation between one first grade teacher and the adult success of children from a disadvantaged urban neighborhood. Includes fourteen tables of data.

**202. Pendergrass, R.A. Strengthening Existing Teaching Styles: A Staff Development Model. Paper presented at the annual meeting of the Association of Teacher Educators, Dallas, 1981. 14p. Available ERIC. ED 204 291.

Many staff development efforts are based on correcting teachers' deficiencies or weaknesses. In this staff improvement model, individual teaching styles and patterns of behavior were identified, so that they could be used in a more professional way. In determining teaching styles, it is pointed out that there is a quantitative aspect and that many styles will overlap. Five teaching styles are described: (1) task oriented, with emphasis on students completing specific tasks; (2) student and teacher cooperation, with the teacher regarded as a flexible leader; (3) child centered, in which the teacher focuses on student interests and needs; (4) subject centered, with the focus on a specific body of knowledge to be learned; and (5) learning centered, where developing self directed, independent learners is a major concern of the teacher. Following identification of individual teaching styles, the developer tries to meet the teachers at their level, and the content of the inservice improvement program is modified to meet specific needs. The delivery of content is done in such a way as to take advantage of each teacher's existing teaching styles and strengths.

**203. Perham, Bernadette Helen. A Study of Multiple Relationships Among Teacher Characteristics, Teaching Behaviors and Criterion-Referenced Student Performance in Mathematics. Technical Report No. 286. Madison: Wisconsin Univ. Research and Development Center for Cognitive Learning, 1974. 81p. Available ERIC. ED 167 360.

This study, carried out in connection with the 1971-72 field

test of the "Developing Mathematical Processes" program, was an investigation of relationships among the teacher characteristics, teaching behaviors, and criterion-referenced student performance in mathematics. Students in 15 class samples of size six, along with their teachers, were the participants. Twenty-two significant relationships were identified among the dependent variables (teacher characteristics) and the criterion variables (teaching behaviors). Membership in a multiunit school and the structuring comments of a teacher significantly influenced student level of mastery on a DMP criterion-referenced Topic Inventory in a positive direction; the verbal behavior of a teacher significantly influenced student level of mastery in a negative direction.

*204. Peterson, Penelope L., and Herbert J. Walberg (eds.). Research on Teaching: Concepts, Findings and Implications. Berkeley, Calif.: McCutchan Publishing Corporation, 1979. 299p.

In Part One of this book, several decades of research in teaching are reviewed by Medley, Rosenshine, Peterson and Kulik. In Part Two, several recent studies are described in detail. They include studies of emotional climate, time variables, and teacher decisionmaking. Part Three identifies new directions in research in teaching, including a reconceptualization of the field and the introduction of information-processing models of teaching and learning. In the concluding chapter, N.L. Gage addresses the question of whether research on teaching should be conducted at the general level or at the specific level. He concludes by hypothesizing that teaching behaviours will fall into a hierarchical model ranging from the highly general to the highly specific.

*205. Peterson, Penelope L., and others. Ability X Treatment Interaction Effects on Children's Learning in Large-group and Small-group Approaches. American Educational Research Journal, v18 n4 p453-73 Win 1981.

Two teachers taught a unit to two classes of students. High- and low-ability students did better in the small group approach, while medium ability students did better in the large group. Analyses of group processes indicated students benefited from peer tutoring processes which occurred in small groups.

**206. Phyfe-Perkins, Elizabeth. Effects of Teacher Behavior on Preschool Children: A Review of Research. Urbana, Ill.: ERIC Clearinghouse on Elementary and Early Childhood Education, 1981. 61p. Available ERIC. ED 211 176.

Through a selective review of the research literature this paper explores the relationship between teacher behaviors and

children's behaviors. Both direct and indirect teacher effects on children's behaviors are reviewed. First, studies of verbal behavior, instructional role, management techniques, classroom structure and teacher behavior, participatory teacher role, and adult effects on antisocial behavior as well as comprehensive studies of teacher behavior are reviewed in the section focusing on direct teacher effects. Studies of indirect teacher effects related to classroom organization and space, initiation of contacts with children, activity settings and scheduling, access to materials and toys, and closed versus open structure settings are reviewed in the second section. The concluding section of the paper indicates in summary form the types of teacher behaviors which appear to be associated with specific child outcomes.

**207. Pieron, Maurice, and Jean Hacourt. Teaching Behaviours at Different Levels of Physical Education Teaching. 1979. 11p. Available ERIC. ED 195 493.

In physical activities, students' attitudes, values, and motivations change during their school years. Two theories concerning these changes are that teacher-student interactions and teachers' behaviors will differ according to the age level of the student groups and that evaluation of a teacher's effectiveness should be specific to the population being taught. Observations of physical education classes in elementary, junior high, and senior high schools for teachers' verbal and nonverbal behaviors suggest that both female and male teachers talk more frequently as students' grade levels increase. This is attributed to several possible reasons--the complexity of the material increases, a more analytical approach is used as skill levels increase, and a drop in motivation observed in older students calls for more intervention by the teacher. An observed tendency for student verbal communication to decline with age increase is thought to reflect, to some extent, a decline of childrens' spontaneity. Frequent positive reinforcement by the teacher is an important element at every age level. The affective aspects of physical education are directly linked to the students' lifetime involvement in sports and recreation long after the end of their formal schooling.

**208. Pike, Kathy. Have You Disabled a Student Today? A Look at Teacher Effectiveness. Paper presented at the annual meeting of the International Reading Association, Chicago, 1982. Available ERIC. ED 216 311.

The research on teacher effectiveness that is reviewed in this paper focuses on teaching as behaving -- the observable aspects of teaching -- and teaching as thinking -- the inner aspects of teaching. The section on teaching as behaving emphasizes the encouraging results of direct instruction (academically focused, teacher-directed classrooms using

sequenced, structured materials), but also discusses management concerns and what constitutes effective class management, psychological conditions that create a good learning situation, and the influence of students and other context variables on teacher behavior. The section on teaching as thinking provides discussions of the teacher as a planner and as a decision maker, teacher judgment, and teachers' implicit theories and perspectives. The summary of these sections notes that teaching is a process of allocating instructional time and assigning academic tasks in such a way that students have opportunities to learn while experiencing a high rate of success and engagement time, and that teaching is a complex process involving more than just a series of discrete, unrelated behaviors.

**209. Plihal, Jane. Types of Intrinsic Rewards of Teaching and their Relation to Teacher Characteristics and Variables in the Work Setting. Paper presented at the annual meeting of the American Educational Research Association, New York, 1982. 14p. Available ERIC. ED 215 978.

In a study of 30 elementary school teachers' perceptions of the rewards of teaching, two major types of intrinsic rewards were found. One kind of reward came from enjoying interactions with the students regardless of the outcome. The other type of reward is achievement oriented and results from feeling instrumental in students' accomplishments. The two types of rewards were negatively related to one another, and each was related to particular factors in the work setting. Correlations were found between types of teaching rewards and students' socioeconomic status, length of teaching experience, and teachers' perceptions of challenges and skills. It was found that student attention in social studies classes was significantly connected with teacher rewards. Differences emerged between social studies and mathematics classes conducted by teachers who were achievement oriented as opposed to those who were experience oriented. Teachers who most enjoyed interacting with students were most likely to engage students in active learning modes that held their attention in social studies classes. Achievement-oriented teachers demanded little active participation of students and used individual rather than cooperative student pacing, which is particularly effective in mathematics classes. Students' attention in these classrooms was neither relatively high nor relatively low.

**210. Popp, Jerome A. Toward a Product-Free Process Analysis of Teaching. 1979. 33p. Available ERIC. ED 177 104.

A framework is suggested for the analysis of teaching, whether for purpose of research, evaluation, or moral inquiry, that is an alternative to the present form of analysis. This form seeks in the analysis of teaching those teacher characteristics that can be established as causally

reactive in producing student achievement. Differing philosophical approaches to the analysis of teaching are presented and discussed. The suggestion is made that research on teaching is a tandem process: an analysis of part to whole relationships that constitute identifiable global types of teaching and an analysis of the caused effects of each type upon children.

*211. Powell, Marjorie. New Evidence for Old Truths. Educational Leadership, v37 n1 p49-51 Oct 1979.

A six-year study of how teachers affect learning of reading and mathematics provides research evidence to support some old truths.

212. Powell, Marjorie. Research on Teaching. Educational Forum, v43 n1 p27-37 Nov 1978.

Implications from research on teaching in the elementary grades indicate that teachers do make a difference in student learning, that a variety of teaching behaviors is needed for different teaching situations, and that behavior patterns, rather than isolated skills, should be defined for competency-based teacher education and teacher evaluation.

**213. Powell, Marjorie. Utilization of Research by a Policy-Making Regulatory Agency: A Case Study. Paper presented at the annual meeting of the American Educational Research Association, Toronto, 1978. 18p. Available ERIC. ED 169 114.

The California Commission for Teacher Preparation and Licensing, responsible for teacher certification and approval of programs of teacher education, is conducting a major research effort to identify teaching behaviors that are related to student learning of reading and mathematics in the elementary grades: The Beginning Teacher Evaluation Study. While the results will not indicate which specific policy alternatives should be adopted, they will have, and already have had, an impact on the thoughts and actions of the members of the policy making body. Policy makers have modified their conceptions of teaching and teacher education; learned about the research process and used research to answer other questions; used results in their individual work; and heard the results quoted by individuals arguing for specific policy decisions. In addition, those subject to the regulations of the Commission have become more aware of and concerned with the results of research on teaching. Specific examples are discussed to elaborate each of these uses of the research results.

214. Powell, Marjorie. Variable Teaching Behaviors: The Importance of Considering Context in Understanding Teaching. Educational Research Quarterly, v4 n2 p36-42 Sum 1979.

Observation data from 46 classrooms demonstrated the importance of context in understanding teacher behavior. Student-teacher interactions for explaining and giving directions occurred a statistically different number of times in self-paced and other-paced (group or interactive) settings.

**215. Prentis, Catherine, ed. Improving School Practice. Summary and Proceedings of the 1981 AEL Regional Forum (Charleston, WV, November 12-13, 1981). Occasional Paper 007. Charleston, W. Va.: Appalachia Educational Lab., 1981. 106p. Available ERIC. ED 216 996.

The program of the 1981 Appalachia Educational Laboratory Forum was based on the theme of improving schools and using research and development. The first section of this report contains summaries of presentations made at the forum. In the first presentation, a discussion is given on outcome-based education, the merits and drawbacks of mastery learning, and the broad goals of education. Classroom management and school effectiveness in the 1980's was the topic of the second presentation. The third presentation offered a proposal for a six year preservice teacher education program. The relationship between state departments of education, school districts, and colleges of education was the topic of the fourth presentation. The final presentation discussed the fundamental questions to be considered in implementing research and development findings in school improvement programs. In the second section of the report, brief descriptions are given of programs in the states participating in the forum. Two papers are appended to the report: "Outcome-Based Instructional Systems", and "Is Creating an Outcome-Based Program Worth the Extra Effort? A Superintendent's Perspective."

**216. R&D Speaks in Junior High School Mathematics: A Research Seminar for Practitioners (Dallas, Texas, August 8-9, 1979). Austin, Tex.: Southwest Educational Development Lab., 1979. 130p. Available ERIC. ED 186 274.

Presented is an account of a day-and-a-half seminar which was held for selected mathematics educators from six states. It was sponsored by the Regional Exchange (RX), a National Institute of Education (NIE) dissemination project headquartered at the Southwest Educational Development Laboratory (SEDL). The seminar had two important purposes: (1) to foster an exchange of information and resources between mathematics researchers and mathematics practitioners; and (2) to lend support to the mathematics preservice/inservice activities in the six-state region. Two researchers were on the program. One was a mathematics educator who discussed

junior high school mathematics teaching in terms of diagnosis, remediation, mathematics anxiety, and problem solving. The other was a research scientist with the Classroom Organization for Effective Teaching (COET) who discussed classroom management research in the junior high school classroom. A synthesis of each of these discussions is given. Questions and answers which occurred during the discussions have been incorporated into the text and hand-outs given during the discussions are included following the texts. Also included are written questions which the participants presented to the researchers, and the answers and recommended resources with which the researchers responded.

*217. Ratsoy, Eugene W., and Leroy V. Sloan. Effective Teaching as a Focus for Supervisory Activity. Canadian Administrator, v20 n7 p1-6 Apr'81.

A list of 21 teaching skills was compiled based on a search of the literature and a questionnaire study. Students in an 8-week practicum in Edmonton area schools were then observed at regular intervals to determine when and to what extent improvements in these skills were achieved by the student teachers. In general, significant changes in student teacher performance were observed for about half of the teaching behaviors examined. The authors conclude that data collection on research based effective teaching behaviors is possible. In consequence, the techniques outlined in the study may be useful in developing practicums for pre-service teachers and professional development programs for in-service teachers.

*218. Rencher, Alvin C., and others. A Discriminant Analysis of Four Levels of Teacher Competence. Journal of Experimental Education, v46 n3 p46-51 Spr 1978.

Attempts to develop a system for gathering more accurate and comprehensive information about the act of teaching. Such an instrument could then be used through longitudinal studies to research which teacher competencies produce certain pupil learning. Instead of limiting research strategy to pretesting and posttesting, this study examines how teachers actually teach.

*219. Robinson, Viviane, and Christine Swanton. The Generalization of Behavioral Teacher Training. Review of Educational Research, v50 n3 p486-98 Fall 1980.

A conceptual framework is developed that is systematically applied to the published literature on the generalization of behavioral teacher training. Two variables were hypothesized to explain the occurrence or nonoccurrence of generalization: the type of training provided and the teachers' attitudes toward the training.

*220. Roehler, Laura R., and Gerald G. Duffy. Classroom Teaching Is More Than Opportunity to Learn. Journal of Teacher Education, v32 n6 p7-11 Nov-Dec 1981.

Recent teacher effectiveness research reveals that teachers of basic skills are more likely to use monitoring and reactive-corrective behaviors. The concept of teaching as assisting consists of a teacher's ability to: (1) create an environment conducive to learning for all children; (2) understand that the instructional responsibility lies with the teacher; and (3) provide learning episodes which promote pupil assistance.

**221. Roos, Marie C. Research on Teacher Effects. Paper presented at the combined annual meeting of the Secondary School English Conference and the Conference on English Education, Omaha, 1980. 9p. Available ERIC. ED 194 520.

The complex task of identifying the characteristics of effective teachers involves analysis of many variables: those dealing with teacher characteristics, those that are context-based, and those that are process-related. Much diversity exists in all three areas among effective teachers, a phenomenon which confounds the problem of precise description of desirable teaching behaviors. In spite of the large amount of process-product research, the current status of research on teacher effectiveness is not impressive by reason of its sparsity and inconsistent results. Results of previous research studies indicate that problems with research on teacher effectiveness include: (1) Research does not measure the teaching process; (2) Records on teacher performance are not kept; (3) Actual classroom behaviors are not monitored; (4) Teacher performance criteria are not specifically denoted and evaluated accordingly; and (5) Improved research methodology and designs in the area of teacher effectiveness are needed.

**222. Rosenshine, Barak. Teaching Functions in Instructional Programs. Paper presented at the National Invitational Conference, "Research on Teaching: Implications for Practice", Warrenton, Va., 1982. Available ERIC. ED 221 538.

Successful experimental programs, in which teachers have been trained to increase their students' academic achievement, were analyzed to identify common teacher functions. Six recent studies in which teachers implemented training and in which students had higher achievement were examined. Conclusions drawn from the analysis include: (1) Students taught with structured curricula do better than those taught with individualized or discovery learning approaches; and (2) Students who received their instruction directly from the teacher achieved more than those expected to learn new material or skills on their own or from each other. A list of specific teaching functions that promote learning was

developed from this study: (1) daily reviewing, checking previous day's work, reteaching if necessary, and checking homework; (2) providing overviews in new content/skills, proceeding in small steps (but at a rapid pace if necessary), giving detailed or redundant instructions and explanations, and phasing in new skills while old skills are being mastered; (3) high frequency of questions and overt student practice, prompting during initial learning, and feedback allowing student response; (4) giving feedback and correctives, recyling instruction if necessary, and making corrections by simplifying questions, giving clues, explaining, and reviewing; (5) providing time for independent practice and seatwork until students are sure of material; and (6) providing weekly and monthly reviews and reteaching if necessary.

*223. Rosenshine, Barak. Teaching Functions in Instructional Programs. Elementary School Journal, v83 n4 p335-51 Mar 1983.

Describes successful teacher training and student achievement programs and identifies major functions or components necessary for effective instruction appearing across these programs.

224. Rouk, Ullik. What Makes an Effective Teacher? American Educator, v4 n3 p14-17,33 Fall 1980.

Reviews three groups of studies which show that effective strategies for teaching reading and mathematics in the primary grades are as diverse as the children they are meant to serve.

225. Rubin, Louis. The Artist Teacher. Illinois School Research and Development, v18 n1 p1-7 Fall 1981.

Likening gifted teaching to artistry in other fields, such as music, the author reports on some experimental attempts to define virtuosity in teaching. The qualities he delineates include common sense, intuition, imagination, understanding of both subject and learner, and dexterity in "staging" learning experiences.

**226. Ruff, Frances K. Instructional Variables and Student Achievement in Reading and Mathematics: A Synthesis of Recent Process-Product Research. Philadelphia, Pa.: Research for Better Schools, Inc., 1978. 45p. Available ERIC. ED 189 135.

The findings of eight reviews of process-product studies are synthesized. Results are organized under the main headings of time, instructional organization, monitoring, management, instruction, and environment. The paper begins with a brief history of research on teacher effectiveness, a

description of the process-product paradigm, and a discussion of some of the problems characterizing this type of research. The studies suggest that the effective teacher (primarily of low SES children in the primary grades) is one who (1) uses time efficiently, keeping students engaged with task-related activities; (2) organizes students into medium to large groups for instruction, (3) correctly monitors work while being available to provide answers to student-initiated questions; (4) assumes the role of a strong leader; (5) asks low-order questions, ensures that students have the opportunity to learn sufficient amounts of content, keeps interaction at a low level of complexity, structures lessons so that students are aware of objectives; and (6) sustains a classroom environment that is warm, friendly, democratic, and relatively free of disruptive behavior.

**227. Rupley, William H., and James F. McNamara. Longitudinal Investigation of the Effects of Teachers' Reading Instructional Emphasis and Pupil Engaged Time in Reading Instruction on Pupils' Reading Achievement. Paper presented at the annual meeting of the National Reading Conference, St. Petersburg, Fl., 1978. 13p. Available ERIC. ED 185 497.

A study was conducted to investigate selected reading instruction process variables employed by third and sixth grade teachers and their effect on pupils' reading achievement, to explore the difference between third and sixth grade teachers' reading instruction process variables, and to investigate the relationship between selected pupil variables and pupils' reading achievement. A sample of 27 third grade teachers and 31 sixth grade teachers were assigned to one of five success status categories based on the pattern of mean reading achievement levels recorded for their actual 1974, 1976, and 1978 classes. The teachers were administered the Survey of Teacher Emphases and Practices in Reading Instruction in 1978. Differences were noted between third and sixth grade instruction in the use of skill books and teacher-made games and individual instruction. Interim findings for 1974 and 1976 indicated a linear pattern of continued emphases; effective teachers of reading reported significantly different instruction and diagnosis emphases and noted significantly different pupil engaged time in reading instruction than did less effective teachers. However, the 1978 data for this pattern was reversed. Teachers identified as effective for the six-year period reported less emphasis for these components than did the less effective teachers.

*228. Rupley, William H., and Patricia Chevrette. Research in Effective Classroom Instruction: Important Findings for Preservice and Inservice Teacher Educators. Action in Teacher Education, v4 n1 p73-79 Spr-Sum 1982.

Research into effective teaching has only recently

begun to yield dependable results. To be most helpful, research must focus on specific practices, and the findings must be used in the education of prospective teachers as well as in inservice education programs.

229. Rupley, William H., and Timothy R. Blair. Teacher Effectiveness Research in Reading Instruction: Early Efforts to Present Focus. Reading Psychology, v2 n1 p49-56 Fall 1980.

Chronological review of various studies from the past 50 years on the effectiveness of methods for teaching reading, conducted to devise criteria and implement methods for greater reading achievement.

**230. Rupley, William H., and others. Identification of Reading Instructional Practices Employed by Elementary Teachers. Paper presented at the annual meeting of the National Reading Conference, Dallas, 1981. 14p. Available ERIC. ED 209 656.

A six-year-long study investigated the reading instructional strategies used by elementary school teachers and identified those strategies used by effective and less effective teachers. At two-year intervals, all third and sixth grade teachers who taught reading in self-contained classrooms were classified as high, average, or low effective teachers. Effectiveness was determined by comparing students' predicted end of year reading achievement with their actual performance. The 64 teachers in the study also completed questionnaires that elicited information about their instructional practices, including skill sequencing, diagnostic record keeping, group organization and instruction, and materials used. The results showed that effective teachers at both grade levels used fewer reading groups than did less effective teachers, and the more effective teachers relied upon commercial skill charts connected directly with a basal reader series, while less effective teachers relied more heavily on teacher prepared charts. All teachers in the study kept diagnostic records, but the more effective teachers placed more emphasis on basal reader diagnostic level tests and less effective teachers on teacher made tests. All teachers used flexible grouping procedures; however, effective teachers used progress as the criterion for changing students from one group to another while less effective teachers used lack of progress as the criterion. Effective teachers relied heavily on basal readers, while less effective teachers did not.

231. Ryan, Doris W., and Lenora F. Butler. Effectiveness of Teaching: The Canadian Experience. Studies in Educational Evaluation, v7 n3 p247-62 1981.

Citing reasons for scarcity of educational research in Canada for the past three decades, the article continues to

illustrate what research, especially in the field of teaching effectiveness, is underway. Innovative instructional technologies, including much individualized instruction and computer-assisted instruction, are of prime concern in Canada currently.

*232. Sanders, James T. Teacher Effectiveness and the Limits of Psychological Explanation. McGill Journal of Education, v16 n1 p67-75 Win'81.

The author reviews the recent history of research on teacher effectiveness, rejects the general tendency to blame its failures on methodology, and calls into question the underlying assumptions of the research as to rationale and paradigm.

*233. Sanders, James T. Teacher Effectiveness: Accepting the Null Hypothesis. Journal of Educational Thought, v12 n3 p184-89 Dec 1978.

The contemporary behavioralistic analysis of teaching assumes a necessary empirical relationship between differences in teacher behavior and levels of student achievement. This paper argues that this assumption lacks both empirical support and conceptual plausibility. Consequences of accepting the null hypothesis of differential teacher effectiveness are discussed.

*234. Scheirer, Mary Ann, and Robert E. Kraut. Increasing Educational Achievement via Self Concept Change. Review of Educational Research, v49 n1 p131-49 Win 1979.

Literature linking self-concept and achievement, and evaluation research on educational programs to improve self-concept are analyzed in terms of several self-concept theories. Evidence for a causal connection between self-concept and achievement is negative. Researchers have failed to explore other theoretical approaches to educational change.

*235. Schofield, Hilary L., and K.B. Start. Product Variables as Criteria of Teacher Effectiveness. Journal of Experimental Education, v48 n2 p130-36 Win 1979.

Explanations are offered for observed discrepant and null findings in the area of predictive information about teacher effectiveness. It is argued that if tautologies are to be avoided, only product variables are appropriate criteria of success. Some recommendations regarding future research are offered.

*236. Silvernail, David L. Teaching Styles as Related to Student Achievement. What Research Says to the Teacher. National Education Association, 1979. 42p. Available ERIC. ED 177 156. Microfiche only.

The relationship between teaching styles and student academic achievement is considered. Results of research studies on direct and indirect teaching styles, formal and informal styles, teacher clarity and enthusiasm, and the effects of different types of feedback to students are discussed. Specifically considered are the use of questions structuring activities, presentation of material, and ways of improving the total ambience of the classroom.

**237. Simon, Anita, ed., and Gil E. Boyer, ed. Mirrors for Behavior III. An Anthology of Observation Instruments. Wyncote, Pa.: Communication Materials Center, 1974. 103p. Available ERIC. ED 170 320.

The 99 observation systems described in this anthology describe measurable categories of behavior, rather than global concepts. These systems function as a meta-language -- a language for describing communication. Each represents one or more of seven major categories: affective, cognitive, nonverbal, activity, content, sociological structure, and physical environment. Most systems use specific predetermined categories such as "teacher asks question," and "pupil gives narrow answer;" a code is assigned to each category and coded sequences are summarized in a form useful for decision making, by a technology known as interaction process analysis. Instruments vary according to number and type of subjects observed, setting, category dimensions, and uses reported by author. A typical instrument is designed for group observation of teacher and pupils in classroom settings; it describes affective and cognitive categories, and has been used by researchers to describe actual teaching in existing classrooms and then to reformulate models of effective teaching. Instruments have also been used for teacher training and supervision, as substitutes for tests, as content for new curriculum, or to specify conditions of learning. Other settings include counseling situations, prisons, hospitals, and industry. (The major portion of this document -- which has been removed--contains the instruments, abstracts, and a 1000-item bibliography.)

**238. Sirotnik, Kenneth A. What You See is What You Get: A Summary of Observations in Over 1000 Elementary & Secondary Classrooms. A Study of Schooling in the United States. Technical Report Series, No. 29. Los Angeles: California Univ. Graduate School of Education, 1981. 45p. Available ERIC. ED 214 897.

Data from observations of 129 elementary, 362 junior, and 525 high school classes were analyzed to raise questions about

classroom environment and classroom practices. Results gathered from four instruments are discussed: (1) physical environment inventory, which recorded classroom architectural arrangement, seating and grouping patterns, furnishings, and materials and equipment; (2) daily summary, which provided an overview of the space and materials available as well as the decision making processes in evidence by students and teacher; (3) five-minute interaction, which was continuous accounting of how time is spent in the classroom and focused on the teacher and student teacher interactions; and (4) classroom snapshots, which provided information about what each adult and student is doing in the classroom, the size of student groups, and the nature of activities in progress. Data gathered from these instruments are analyzed with both "narrow" and "broad" perspectives. The narrow perspective concludes that further research is necessary concerning teaching practices in the context in which they occur. The broader view concludes that the data collected represents an educational scenario that fits the wishes of neither education providers nor recipients. Concluding remarks are made about the processes and necessity of educational change. Tabular presentations are made of some of the data analyzed for this study.

*239. Sirotnik, Kenneth A. What You See Is What You Get -- Consistency, Persistency and Mediocrity in Classrooms. Harvard Educational Review, v53 n1 p16-31 Feb'83.

Based on data gathered from over 1,000 elementary and secondary classrooms, Kenneth Sirotnik finds that there is little variety in teaching practices across schools in this sample -- the majority of class time is spent in teachers lecturing to the class or in students working on written assignments. After examining the literature of earlier classroom observation research and comparing it to the findings of this study, Sirotnik notes the persistence of such teaching practices over the course of the century. He then questions whether this type of teaching fulfills our idea of what functions schools should serve in our society.

*240. Smith, B. Othanel. Some Comments on Educational Research in the Twentieth Century. Elementary School Journal, v83 n4 p488-492 Mar'83.

The author points out that, despite the problems common to empirical research, pedagogical research has produced results so plausible that critics tend to describe the findings as "facts" that have always been known about teaching. These facts, however, are acquired from recent literature.

**241. Smith, Howard A. Nonverbal Behavior and Student Achievement in the Elementary Classroom. Paper presented at the meeting of the Canadian Society for the Study of Education, Saskatoon, 1979. 40p. Available ERIC. ED 181 000.

An investigation of the principal nonverbal factors elicited by four major correlational studies that examined the relationship between process and product variables in American elementary school classrooms yields several discernible trends, but for the most part contributes mainly to establishing a set of recommendations to guide future research in the field. Use of classroom space, student movement about the classroom, and assorted proxemic and kinesic teacher behaviors are the foci of the study. A bibliography is appended.

*242. Smith, Lyle R. Task-Oriented Lessons and Student Achievement. Journal of Educational Research, v73 n1 p16-19 Sep-Oct 1979.

A high degree of classroom activity relevant to the lesson content positively influenced achievement in high school algebra lessons.

*243. Smith, Lyle R., and others. Effect of Teacher Transitions and Superfluous Content on Student Achievement and on Perception of Lesson Effectiveness in High School English. Journal of Educational Research, v75 n3 p173-77 Jan-Feb 1982.

A study examined the effect of teacher transitions and lesson content on lesson effectiveness as perceived by high school English students. A lesson was presented involving parallel sentence structure, and students were tested on comprehension of the material. Results indicate that teacher transitions significantly affected achievement but additional content did not.

**244. Snyder, Karolyn J. Imperatives in Staff Training, Evaluation, and Management. Paper presented at the annual meeting of the American Educational Research Association, Los Angeles, 1981. 37p. Available ERIC. ED 208 588.

In serving two purposes, this paper explores elements in the current gap between what is known and what is practiced about how to influence student achievement and proposes a conceptual framework and an action model for rethinking the organization, management, and technologies of instructional programs. A comprehensive goal-based and role-based planning model is presented that offers specific recommendations for the inservice training of administrators and instructional staff to promote improved individual performance. The model is in three parts: part 1 defines the targets for district improvement efforts and the beliefs about those targets; part 2 provides district standards for

the performance of all role sets; and part 3 presents the process for managing organizational behavior (individual performances) to complement selected district priorities.

**245. Soar, Robert S., and Ruth M. Soar. Setting Variables, Classroom Interaction, and Multiple Pupil Outcomes. Final Report. Gainesville: Florida Univ., Institute for Development of Human Resources, 1978. 119p. Available ERIC. ED 225 999.

Four general problems (two substantive, two methodological) were addressed in a research project: (1) Does the nature of the pupil or the setting make a difference in the teaching style which is most effective? (2) Does the cognitive level of the learning objective make a difference? (3) How can relationships within the classroom be analyzed? and (4) How should composite measures of classroom behavior be formed? Chapter one of this final report presents a brief overview of the project, which tested relationships between teaching style and pupil gain in a first and a fifth grade sample of pupils who differed in sex, race, socioeconomic status, IQ, anxiety, motivation, cognitive style, dependency, locus of control, or pre-test standing. Chapter two is a review of literature on research studies utilizing different methodologies: process-product relationship; trait-treatment interaction; and analysis at different levels of aggregation. The third chapter reports on a reanalysis of data collected from fifth and first grade classrooms in a previous project during 1969-70. Chapter four presents and discusses problems studied in this project: (1) to develop a set of process measures to serve as alternatives to the factor scores which had previously been used; (2) to develop procedures for analysis within classroom relationships; (3) to analyze interactions between characteristics of pupils and the teaching style which is most effective; and (4) to seek differences in the classroom behaviors which are associated with most effective learning for outcomes which differ in cognitive level. The fifth chapter presents a summary of the project and implications of the findings.

**246. Southwest Educational Development Lab. R&D Speaks in Reading: Research for Practitioners; Proceedings of a Reading Conference. 1979. 73p. Available ERIC. ED 176 207.

This report presents a synthesis of a day-and-a-half interactive conference on research and development in reading attended by a group of reading specialists from Arkansas, Louisiana, New Mexico, Oklahoma, and Texas representing their state departments of education. It includes the two presentations "A Sampling of Research Within Reach" by Phyllis Weaver, which deals with understanding reading comprehension and gives suggestions for teaching reading comprehension and "Effective Classroom Management" by Linda Anderson, which discusses effective classroom

management and discipline that will provide the optimum learning situation for children. The short exercises used by each presenter to facilitate discussion as well as participant responses to the program, an agenda, and a list of materials displayed at the conference are included.

**247. Spaulding, Robert L. Adapting Teaching Styles to Learning Styles. Paper presented at the annual meeting of the American Educational Research Association, Toronto, 1978. 29p. Available ERIC. ED 161 870.

Case studies were conducted to assess the personal learning styles and behaviors of elementary school children to provide teachers the opportunity of using prescribed teaching techniques to match students' styles. Six groups of behaviors were identified: (1) students demonstrate little internal control and are likely to act out and create disturbances; (2) students are resistant to authority and imposed structure; (3) students are fearful and avoid situations involving risks; (4) students are easily distracted; (5) students are concerned with adult approval and show respect for authority; and (6) students have internal controls, can be relied upon to stay on-task, and respond well to self-managed study plans. The behavior characteristics of each of the six groups are described. Treatment schedules for teachers to use in a classroom setting of each type of student are described in detail. The results of their application by teachers in eight case studies are presented and discussed.

**248. Spaulding, Robert L. Helping Teachers Acquire Effective Strategies. Strand VII. Teacher Behavior and Student Learning. 1978. 16p. Available ERIC. ED 196 851.

The Spaulding Teacher Activity Rating Schedule (STARS) describes twenty-five teaching styles. In the "Story Teller" teaching pattern, children listen while the teacher narrates, explains, or reads. The teacher motivates the students to contribute. In the "Lecturer" style, the teacher explains, describes, or illustrates but does not ask the student to recall or apply abstract concepts. The "Examiner" focuses student attention on content areas and asks for recall of specific information. The "Entertainer" frequently digresses from the subject matter while the students contribute digressions of their own. The "Controller" uses negative control techniques such as criticism and threat of punishment. "Counselors" respond to behaviors of students by giving reinforcement, redirecting behavior, and setting goals. The "Discovery Teacher" focuses the attention of students on specific categories or concrete materials. "Socratic Teachers" focus on deduction of logical implications to be drawn from factual information. Other teaching and classroom management styles involve behavior modification principles, attentiveness and

on-task factors, the rote process, various authoritarian methods, and discipline control approaches.

**249. Stallings, Jane A. Changing Teacher Behavior: A Challenge for the 1980's. Paper presented at the annual meeting of the American Educational Research Association, Los Angeles, 1981. 39p. Available ERIC. ED 200 596.

A training program for changing teachers' classroom behaviors was developed after observations indicated that students gained in reading skills when teachers spent more time instructing, discussing homework, and providing supportive feedback. During workshop sessions teachers were encouraged to: (1) decrease time taken to make assignments and increase instruction time; (2) ask short questions and give immediate supportive feedback to responses; (3) distribute questions among the students, choosing questions each student could most likely answer; (4) give short quizzes designed to allow the students a high rate of success; (5) have the students in the low reading groups read aloud; (6) encourage more reading aloud, discussion, and review, and ask for fewer written assignments and less silent reading; (7) minimize intrusions from outside the class; and (8) keep the number of choices students may make at a minimum. A posttest of student reading achievement in classes where the teacher had attended the workshops showed that the treatment group had higher grade gains than the control group.

*250. Stallings, Jane A. Follow Through: A Model For Inservice Teacher Training. Curriculum Inquiry, v9 n2 p163-181 Sum'79.

An extensive observational study conducted by SRI indicated that the Follow Through sponsors were successful in training teachers to follow their particular instructional models. The author suggests that students in teacher education programs might learn how to implement several different models and would in consequence have a repertoire of teaching skills to draw upon, in accordance with the particular learning outcomes being sought. For example, a more structured model might help elementary children achieve in reading and mathematics, whereas a more open model might help children develop nonverbal problem-solving skills.

251. Stallings, Jane A. How to Change the Process of Teaching Reading in Secondary Schools. Educational Horizons, v57 n4 p196-201 Sum 1979.

Reports a study of the teaching of basic reading skills in secondary schools. Through systematic observations of classrooms, several key variables were identified which related to reading gains measured by the Comprehensive Test of Basic Skills. Several administrative practices

important to successful remedial reading programs are also delineated.

252. Stallings, Jane A. How Useful are the Findings from the Research on Teaching? 1981. 20p. Not available ERIC. ED 223 583.

An overview is presented of research studies (carried out in the 1970s) dealing with the influence of time on student academic achievement. Discussions illuminate studies and findings about: (1) length of school day; (2) academic learning time; (3) achievement levels and academic time; (4) clarity of first day organization and planning; (5) time distributed across class activities; (6) interactive supportive instruction; (7) focus of instruction; (8) student understanding of lessons; and (9) curriculum and instructional strategy. In considering the reliability of research findings in these areas, it is pointed out that many of them have been used to train teachers in new modes of thinking and have produced changes in their ways of teaching. Major findings are also reported on a study examining links between school policy, leadership style, teachers' and students' attitudes, and teachers' and students' behavior. The point is made that, in the past decade, schools have been studied in isolation, classrooms in isolation from schools, and students in isolation from classrooms and school. The charge for the next decade is asserted to be to study the whole school context, taking into consideration administration, teachers, and students together. It is suggested that the results of this type of research, combined with the empirical findings generated during the 1970s, should enable the development of a comprehensive and practical theory of effective schooling. A list of 13 reference notes and 11 references is included.

**253. Stallings, Jane A. The Secondary School Teacher as an Adult Learner. Paper presented at the annual convention of the American Psychological Association, 1981. 54p. Available ERIC. ED 210 269.

This paper discusses the Study of Teaching Basic Reading Skills in Secondary Schools, a project that devised an inservice training model for secondary school teachers who needed skills in reading instruction. In Phase I of the study, 46 secondary reading classrooms were observed to examine the relationship between teaching practice and student gains in reading. The results of this phase provided specific guidelines for effective instructional strategies to use with secondary remedial reading students. Needs were found in the areas of interactive instruction, supportive behavior, off-task activities, and organization and grouping. In Phase II, the findings were translated into a series of workshops for 47 teachers in the districts where Phase I was conducted. One neighboring

district was also included. Half of the teachers, the treatment group, were trained; the other half, the control group, received no training until the end of the experiment. Twenty-two of the 24 treatment teachers changed behavior in recommended ways, and their students made more reading gains than did students of teachers in the control group. Appended to the paper are tabular data supporting the findings and a description of the seven workshops in Phase II.

**254. Stallings, Jane A. Teaching Basic Reading Skills in Secondary Schools. Paper presented at the annual meeting of the American Educational Research Association, Toronto, 1978. 35p. Available ERIC. ED 166 634.

A total of 905 students and 51 teachers were involved in a two-phase study of the teaching of basic reading skills in secondary schools. The first phase of the study used an observation instrument, student ratings, a teacher questionnaire, and a reading achievement test to identify teaching processes that are efficient in helping secondary school students learn to read. The results suggested that, to achieve the most in reading, students should spend much of their class time using workbooks and textbooks, that teachers should use positive feedback and should work frequently with a group of students or with the total class, and that social interaction during class time should be limited. Through a series of workshops, the second phase of the study sought to translate these findings into information that could be used by classroom teachers to increase students' reading achievement. Teachers were placed into either an experimental group that was trained immediately according to the phase-one findings or into a control group that received training later. While the complete data from the study have not been thoroughly analyzed, preliminary findings indicate that teachers in the experimental group have reduced the negative behavior in their classrooms, have increased the amount of positive feedback, and have increased the amount of oral reading with low-reading-ability students.

**255. Stallings, Jane. What Research Has to Say to Administrators of Secondary Schools About Effective Teaching and Staff Development. 1981. 38p. Available ERIC. ED 209 748.

A review of research literature on the effective teaching of basic skills in secondary education and a description of a model staff development program provide guidelines for school administrators in improving teachers' skills. The literature identifies both classroom- and school-level factors influencing teacher effectiveness. Classroom factors involve teacher organization and planning on the first school day, students' time on task, task variety, teacher-student interaction during instruction, and the size of instructional groupings. School factors include school climate, absences and tardiness, policies regarding

classroom intrusions, grading systems, teacher access to student achievement data, and parental support. Administrators wishing to foster the development of teacher skills in these areas can choose from a variety of training workshops for teachers. The author describes a model workshop program that includes a pretest phase to find what skills the staff needs, an informational phase linking theory and practice, a phase for guided practice, and a posttest or followup phase to assess changes in teacher behavior. The author also lists 15 necessary conditions for this model program. An appendix details the seven workshops that comprise the program.

**256. Stallings, Jane A., and Georgea G. Mohlman. School Policy, Leadership Style, Teacher Change and Student Behavior in Eight Schools. Final Report. Mountain View, Calif.: Stallings Teaching and Learning Institute, 1981. 131p. Available ERIC. ED 209 759.

Eight secondary schools participated in this study of the relationships among school policies, principal leadership style, teacher behavior, and student behavior. Data were gathered through student and teacher observations, student and teacher questionnaires, student absence records, observations of the physical environment, and interviews with principals. As one facet of the study, all teachers participated in the Stallings Effective Use of Time Training Program. A number of major findings emerged: (1) in schools where policies and rules were clearer and more consistently enforced, teacher morale was higher and there were fewer classroom intrusions, less litter and vandalism, a lower absence rate, less class misbehavior, and more time spent on task; (2) in schools with more administrative support services and fewer burdensome duties, teacher morale was higher and there was less classroom misbehavior; (3) in schools where the principal was more collaborative and respectful, teachers had higher morale and students perceived teachers and students as more friendly; (4) in schools with more supportive principals, more teachers implemented the training program; (5) in schools where the policies and rules were clear and consistent, more teachers changed their classroom behavior as recommended by the program; and (6) in schools where the teachers implemented the training program, students spent more time on task.

**257. Stallings, Jane, and others. A Study of Basic Reading Skills Taught in Secondary Schools. Report of Phase I Findings. Menlo Park, Calif.: SRI International, 1978. 186p. Available ERIC. ED 210 669.

The first of three related reports, this volume describes the findings of the first phase of a study designed to identify teaching processes that are efficient in helping secondary school students learn to read. Following an introduction

that provides background information about the study, the second chapter of the report discusses the design of the study, while the third chapter describes the selection of the schools and teachers in the study sample. Chapter four discusses the classroom observation instruments and the characteristics of the teachers studied, while chapter five focuses on the selection and training of the classroom observers. Chapter six contains an analysis of the results of the observations, followed by the conclusions and implications of the study. Appendixes include the observation instrument and training manual, test instruments, observer reliability agreement data, raw score conversion tables, and observation variables.

**258. Stallings, Jane, and others. Early Childhood Education Classroom Evaluation. Menlo Park, Calif.: SRI International, 1978. 114p. Available ERIC. ED 210 120.

A finding in the 1975-76 evaluation of several California programs designed to improve the academic achievement of young children indicated that in schools whose students scored at or below the twentieth percentile on the Entry Level Test in 1973-74, third grade reading test scores had declined relative to their predicted scores over the three-year period from 1973-74 to 1975-76. Although the aggregate finding for that group of schools indicated a decline in scores relative to prediction, individual schools could be identified that had patterns of scores that increased over the period in question, as well as schools in which scores declined. This study was designed to investigate the circumstances associated with this decline or improvement in third-grade reading achievement. Seven "increaser" schools and seven "decreaser" schools were identified, and a total of 45 third-grade classrooms were observed. Reading test scores from the California State Assessment of 1976 and 1977 and attendance data were obtained for the year. Major findings included the following: (1) higher classroom gains were associated with lower teacher-student ratios; (2) highly controlled classroom environments using systematic instruction and much positive reinforcement contributed to greater reading achievement scores; (3) small group instruction was more efficient and effective in increasing reading achievement than was individualized instruction; and (4) great classroom diversity was observed in terms of instructional processes and achievement gains. Appendices include the classroom observation instrument, and operational definitions for the observation instrument.

**259. Stallings, Jane, and others. How to Change the Process of Teaching Basic Reading Skills in Secondary Schools. Phase II and Phase III. Final Report, Revised Materials. Menlo Park, Calif.: SRI International, 1980. 30p. Available ERIC. ED 210 671.

The third of three related reports, this document

contains revised materials for the second and third phases of a study designed to identify teaching processes that are efficient in helping secondary school students learn to read. The materials in the document include an updated report of the effects of the teacher training workshops offered in the second phase of the study on teacher behavior, updated tables of data, revised text from the analysis and results of the third phase of the study, and a revised appendix of the first and second phase observation variables.

**260. Stallings, Jane, and others. How to Change the Process of Teaching Basic Reading Skills in Secondary Schools. Phase II and Phase III. Final Report. Menlo Park, Calif.: SRI International, 1979. 279p. Available ERIC. ED 210 670.

The second of three related reports, this volume includes the final reports for the second and third phases of a study designed to identify teaching processes that are efficient in helping secondary school students learn to read. The report of the second phase describes an experiment in which a group of teachers was trained to use specific organization and management techniques in classes where they were attempting to help students gain reading skills. The third phase report compares the results of a treatment group of teachers trained by second phase teachers with those trained by Stanford Research Institute staff and with a control group that received only the training materials. Following an introduction to the background of the study, the first nine chapters of the report describe the second phase design, sample, instruments, and data collection, as well as the individual workshops and their effects on teacher behavior and student achievement. The next three chapters discuss the background of the third phase of the study, and its design and findings. Appendixes include the instruments from the study, characteristics of the students tested for reading skills, observation variables, data from the first phase of the study, and observation variables of all three phases.

261. Stilmac, Michele. A View toward Expanding BTES. California Journal of Teacher Education, v9 n2 p84-96 Spr 1982.

The Beginning Teacher Evaluation Study, using a behavioral approach, sought to identify classroom conditions and activities that foster student learning. A study that focuses on both affective and cognitive variables of the teaching-learning process is also needed.

**262. Swanchak, John, and James R. Campbell. Teacher Behavior -- Pupil Effect and Instructional Improvement. 1980. 14p. Available ERIC. ED 205 489.

Teacher effectiveness research has used changing criteria

over the years in assessing and evaluating teacher performance and its effect on student achievement. Early researchers accepted the idea that there should be a relationship between the personality or traits of the teacher and student outcomes. Lists of characteristics of superior teachers were used to measure teacher behaviors. A change of focus took place when researchers began to examine teaching processes by systematically observing classroom behavior. Subsequent teacher effectiveness research postulated that successful teachers believe that their major task is to teach and allot more time for instruction. Thus, the focus shifted to studies of the teacher behaviors that lead to efficient use of time on the part of students. Various studies have indicated that parental expectations and the student's prior achievement, measured intelligence, and socioeconomic status may have a greater impact upon a student's achievement than teachers and the school. The question is raised as to how true equality of opportunity may bring about greater academic achievement for all students.

263. Taebel, Donald K., and Joan G. Coker. Teaching Effectiveness in Elementary Classroom Music: Relationships among Competency Measures, Pupil Product Measures, and Certain Attribute Variables. Journal of Research in Music Education, v28 n4 p250-64 Win 1980.

This study of 29 elementary music teachers sought to determine if teaching competencies can reliably be measured through classroom observation; which selected competencies correlate to measures of pupil achievement and attitude; and how achievement and attitude related to attribute variables, such as socioeconomic status, grade level, and class time.

*264. Taylor, Gail Cohen. ERIC/RCS: Findings from Research on Teacher Effectiveness. Reading Teacher, v34 n6 p726-30 Mar 1981.

Reviews documents in the ERIC system that deal with research in the area of teacher effectiveness.

**265. Texas Junior High School Study: Final Report of Process-Outcome Relationships; Classroom Observation Scales. Appendix B. Austin: Texas Univ. Research and Development Center for Teacher Education, 1978. 59p. Available ERIC. ED 173 746.

This is the third in a series of four reports describing a study of 1,614 junior high school mathematics and English students and 69 of their teachers that was undertaken to discover the effects of different teaching behaviors on cognitive and affective student outcomes. This booklet contains a discussion of different types of direct observation techniques, including their advantages and disadvantages; 12 scales for use in classroom

observation, including definitions of the scales' behaviors and some examples; and a discussion of reliability data for the scales, including between-observer agreement and stability estimates.

**266. Theobald, John Hamilton. Attitudes and Achievement in Biology: An Investigation of the Effects of Student Attributes and Teaching Styles on Attitudes and Achievement in Secondary School Biology. Ph.D. thesis, Monash University, Australia, 1977. 370p. Available ERIC. ED 165 989.

Using a specially-constructed category system (CATS), biology lessons are analyzed for attribute-treatment interaction (ATI) and the data submitted to analysis. Relationships between fifteen individual predictors (general ability, four personality factors, two cognitive preferences, treatment, and seven first-order attribute-treatment interactions) and criterion variables (four attitude scales and two achievement tests) are studied using multiple regression analysis. The unique contribution of each term, controlling for all others, is tested. Among the results reported, "enjoyment in biology" is considered to be a function of a cautious, convergent outlook, and an intellectual disposition. General ability and an intellectual disposition lead to high scores on a memory task in biology, and on this criterion, class-centered teaching is considered better for students who are both open-minded and have a cognitive preference for rate learning, and individual-centered teaching is considered better for dogmatic students and those with a cognitive preference for principles. On an achievement test sampling higher cognitive processes, high general ability, open-mindedness, and a cautious personality are advantageous and individual-centered teaching is better than class-centered teaching for all but students with a highly intellectual disposition.

*267. Tom, Alan R. The Reform of Teacher Education through Research: A Futile Quest. Teachers College Record, v82 n1 p15-29 Fall 1980.

Educational researchers cling to the goal of a science of education although this objective is unlikely. Research should focus on a conception of the teaching-learning process that confronts the full complexity of educational phenomena.

*268. Travers, Robert M.W., ed. Second Handbook of Research on Teaching. Chicago: Rand McNally, 1973. 1400p.

The forty-two chapters of the Handbook provide a wide-ranging overview of research results, theories, methodologies and ideas for further study. A number of chapters are included on the teaching of specific school subjects.

*269. Troisi, Nicholas F. Effective Teaching and Student Achievement. Reston, Va.: National Association of Secondary School Principals, 1983 16p. Available ERIC. ED 231 067. Microfiche only.

Middle level and senior high school principals and teachers can benefit from studies focusing on the relationship between teaching effectiveness and school characteristics, classroom management, teacher expectations, school climate, learning time, and learning/cognitive style. Research (Rutter et. al, 1979) shows that emphasis on academics, teacher-student interactions, incentives, and rewards make a difference in school outcomes. Classroom management studies conclude that academic achievement and student attitudes improve as more time is spent on task-oriented instructional activity presented clearly and professionally. Teachers' high expectations and ability to create positive, caring school climates contribute to high student achievement. Cognitive studies and learning style research help teachers know their students' abilities and skills. Such studies confirm that most students learn better from touching, doing, and experiencing than from lectures. Effective teachers are successful in planning and preparation, classroom management, and student evaluation, but the study concludes that the key to establishing and maintaining a climate conducive to academic achievement is effective administrative leadership. The small number of studies on teaching effectiveness beyond the elementary level demands, however, that conclusions remain tentative about effective teaching in middle level and senior high schools.

**270. Turner, Richard L., and others. Interpreting Research Results on Teaching. Washington, D.C.: ERIC Clearinghouse on Teacher Education, 1979. 52p. Available ERIC. ED 164 517.

This publication is a collection of commentaries on a published monograph entitled "Teacher Competence and Teacher Effectiveness: A Review of Process-Product Research" by Donald M. Medley (1977). Medley's stated purpose was to provide teacher educators with access to the meaningful findings of research in teacher effectiveness. The papers here comment on Medley's methodology and procedures; consider the inferences/implications for teacher education of the findings reported in Medley's review; and predict what Medley's approach portends for the future of research and selection of topics for further investigation in teacher effectiveness.

*271. Tursman, Cindy. Good Teachers: What to Look For. Education USA Special Report. Arlington, Va.: National School Public Relations Association, 1981. 101p. Available ERIC. ED 222 482. Microfiche only.

Trends and issues in research into effective teaching are examined in this report. The status of the teaching profession is discussed in the first chapter, and

developments in teacher evaluation, unionization, and effective schools research are traced. In the second chapter, research findings on the effects of teaching styles and of teacher behavior and attitudes are reviewed. Chapter 3 contains an overview of findings on teaching methods. Successful school models are described, and variables in the teaching setting, such as class size, formal versus informal instruction, and individualized instruction methods are featured. Research on classroom management and behavior problems is reviewed in the fourth chapter. The fifth chapter contains excerpts from interviews with 11 Teachers of the Year on their teaching methods and their attitudes toward teaching. Recommendations, models, and tips are offered in the sixth chapter. A bibliography of over 60 references is appended.

272. Vaughan, Joseph. Using Research on Teaching, Schools and Change to Help Staff Development Make a Difference. Journal of Staff Development, v4 n1 p6-24 May 1983.

This article synthesizes research on teacher effectiveness, school effectiveness, and organizational change and interprets what the findings imply for staff development in the schools. Nine research-based themes for staff development efforts are outlined.

**273. Verhoeven, Ad F.M. The Assessment of Teacher Effectiveness by the Pupils. Paper presented at the International Association for Educational Assessment, Baden, Austria, 1978. 10p. Available ERIC. ED 166 190.

A research program to investigate interactions of instruction styles and learner characteristics related to learning results in junior high schools is described. Data was gathered both by observation of the teacher in the classroom and by responses of pupils on their perceptions of the teacher. Different teaching styles are defined and referred to as functional teaching styles, because they deal with the functioning of the teacher in the teaching-learning situation. There are four phases to this research project: (1) determination of the teaching styles of about 100 junior high school teachers; (2) determining the pupil characteristics that are related to teaching styles; (3) determination of the criteria to which the interacting of teaching styles and pupil characteristics were compared, and (4) in the future, conducting the interaction project with a new group of teachers and pupils. The research is incomplete at this time, and only one hypothesis emerges as having strong support -- in class settings a teacher who teaches by means of questions and giving feedback rather than by means of explaining and answering is more effective than average when the criterion is a cognitive one.

**274. Waimon, Morton D., and others. Using Product Analysis to Develop Self-Improvement Skills in CBTE Programs. 1979. 17p. Available ERIC. ED 175 810.

It was hypothesized that a structured analysis of pupil outcomes will improve the attitudes and performance of prospective teachers. This procedure, known as Product Analysis, is a self-regulation technique based on the assumption that teachers who are able to monitor the effects of their teaching behavior on student achievement will alter that behavior appropriately to maximize positive effects. Two groups of prospective teachers were used as subjects to test this hypothesis. One group received training in using the Product Analysis technique, the other did not. Subsequent test results of the two groups indicated significant behavior change in the training group and substantially higher pupil achievement.

*275. Walberg, Herbert J., and others. The Quiet Revolution in Educational Research. Phi Delta Kappan, v61 n3 p179-83 Nov 1979.

A review of a decade's research indicates that the greatest confidence can be placed in the effects of opportunity, exposure, and instruction on achievement, retention, and attitudes.

**276. Wang, Margaret C. Provision of Adaptive Instruction: Implementation and Effects. Pittsburgh, Pa.: Pittsburgh Univ., Learning Research and Development Center, 1982. 74p. Available ERIC. ED 223 359.

Despite increased interest in and acceptance of the concept and mandate of providing adaptive instruction to ensure schooling success for each student, a sizable gap exists between identification of specific educational practices and application of such practices in schools. The work described in this paper is aimed at examining the feasibility and practicability of widespread implementation of an adaptive instruction approach. Discussion focuses on four areas: (1) the conceptual and practical implications of the adaptive instruction approach and the effective allocation and use of school time; (2) the rationale and design of an adaptive instruction program that includes features thought to be particularly effective in enhancing student learning; (3) the results of a descriptive study of the program's impact on classroom processes, student achievement, and the allocation and use of school time; and (4) the comparability of the study's findings with recent literature on effective classroom instruction in general and investigations of the use of school time and student learning in particular. The descriptive study was conducted in 156 kindergarten through third-grade classrooms where the Adaptive Learning Environments Model was implemented as the core

educational program. It is concluded that it is unnecessary to trade off achievement in basic skills for student growth in areas such as independence, self-responsibility, and social cooperation.

277. Ward, Beatrice A., and others. An Expanded View of the Student Outcomes That Are Built or Restrained by Teaching Processes and Structures. San Francisco: Far West Lab. for Educational Research and Development, 1981. 33p. Not available ERIC. ED 223 585.

Potential "indicators" of teaching effectiveness, taken from various studies of teaching, are discussed. It is assumed that the generally accepted goals of education are to enable students to learn, acquire basic skills, and develop skills and attitudes necessary for them to become employable adults. Criteria for selecting these indicators of teaching effectiveness are listed: (1) Indicators are affected by what a teacher does or does not do; (2) Indicators are observable within a relatively short time period in the actual teaching situation; (3) Indicators have a logical/theoretical link with students' acquisition of the general educational goals; and (4) Indicators accommodate individual differences among students and teachers. A discussion is presented of indicators that meet the criteria: (1) agreement between teacher intent and student understanding of what is to be learned/accomplished/produced; (2) congruence between schooling goals and the student participation requirements of the classroom; (3) use of time in the classroom; and (4) students' views of themselves and others. It is suggested that, if these indicators occur in an observable short time period of each classroom and if they accumulate over several years of schooling, students will have successful schooling experiences and will attain the general goals of education. Research findings from various studies of teaching are cited in discussing each of these indicators of teaching effectiveness.

278. Washington, Valora. Noncognitive Effects of Instruction: A Look at Teacher Behavior and Effectiveness. Educational Horizons, v57 n4 p209-13 Sum 1979.

To explore the noncognitive impact of teachers on their students, a review of teacher behaviors and interpersonal variables influencing teaching effectiveness is presented. Four pupil traits are explored -- sex, social class, achievement level, and classroom seating--which relate to discrepancies in the frequency and quality of teacher behavior.

279. Webb, Graham. An Evaluation of Techniques for Analysing Small Group Work. Programmed Learning and Educational Technology, v18 n2 p64-66 May 1981.

Discusses some of the better known interaction analyses for analyzing teacher behavior generally and the teaching of small groups. One particular category system is advocated and problems in using it are noted, as well as its strengths for general, nonspecialist use. Seven references are listed.

**280. Webb, Norman L., and others. IGE Evaluation Phase IV: DMP Descriptive Study Final Report. Report from the Project on Evaluation of Practices in Individualized Schooling. Madison: Wisconsin Univ. Research and Development Center for Individualized Schooling, 1980. 145p. Available ERIC. ED 196 903.

Individually Guided Education (IGE) is a complex educational system intended to enable the elementary school to provide an environment where students learn at a rate and in a manner appropriate to their own learning styles. This descriptive study concerns the implementation of the Developing Mathematical Processes (DMP) instructional program, which was created to be compatible with the IGE system. DMP approaches mathematics through the measurement of attributes. The major content areas are problem solving, place value, attributes, measurement, addition and subtraction, multiplication and division, fractions, geometry, and statistics. An emphasis is placed on exploring relationships between objects using processes such as describing, classifying, ordering, equalizing, joining, separating, grouping, and partitioning. The study was carried out at two schools; grades 2 and 5 participated at each school, and data were collected through tests on general objectives of the program, observations, teacher logs, and interviews. Profiles by school for each grade on means of instruction (pacing, grouping, materials, and interactions), time use (allocated, nonapplied, available, and engaged time), and achievement provide a basis for discussing the relationships among the variables. The report concludes with an analysis of the relationships among the variables as well as a discussion of unanticipated outcomes having implications for educational research and elementary education as a whole.

**281. Weber, Wilford A., and others. A Mini-Instructional System for Increasing Teacher Classroom Management Competence. Paper presented at the annual meeting of the Association of Teacher Educators, Orlando, 1979. 17p. Available ERIC. ED 170 273.

The findings from two studies (Pre-Post and Matched-Pairs) suggest that the mini-instructional system that was designed to provide teachers with training in the analytic-pluralistic approach to classroom management did have a very positive impact on those teachers who received this training. The mini-instructional system is one in

which classroom management is viewed as a four-stage process in which the teacher: (1) specifies the desirable classroom conditions; (2) identifies discrepancies between the existing behaviors and those deemed desirable; (3) utilizes those specific managerial behaviors that will most effectively narrow the gap; and (4) evaluates his or her managerial effectiveness. Specifically, findings suggest that the training is effective in fostering those teacher attitudes and teacher managerial behaviors thought to be related to desirable student outcomes.

*282. Weinrott, Mark R., and others. Convergent and Discriminant Validity of Five Classroom Observation Systems: A Secondary Analysis. Journal of Educational Psychology, v73 n5 p671-80 Oct 1981.

A secondary analysis was conducted to test the validity of five behaviors from five classroom observation systems: approves/praises; asks questions; criticizes/disapproves; gives directions; and presents facts or judgments. Scores for each were intercorrelated and arranged in a multitrait-multimethod matrix. Evidence was found of construct validity for all behaviors examined.

*283. Weinstein, Rhona S. Student Perceptions of Schooling. Elementary School Journal, v83 n4 p287-312 Mar 1983.

Summarizes research on student perception of schooling, identifying seven areas of knowledge about student perspectives on classroom life and suggesting several directions for further research.

*284. Weldy, Gilbert R. Principals Are Instructional Leaders. It's a Fact--Not a Myth. NASSP Bulletin, v63 n423 p71-76 Jan 1979.

In theory and fact, in position and function, the principal is indeed the instructional leader of the school. There are research findings on teacher effectiveness that can and must be used by principals in their function of instructional leadership.

**285. Williams, Richard C. Changing Teacher Behavior: From Symbolism to Reality. 1981. 21p. Not available ERIC. ED 223 584.

The most important interaction in a school system, teacher classroom behavior and its effects on pupils' learning, is largely unattended to in any direct supervisory manner in most school districts. School administrators have allowed administrative matters to divert them from their central task, which should be the school's curriculum and instructional program. School districts pay close attention to such things as credentials

of teachers and accreditation-related standards; little attention is paid to whether teachers actually teach the established curriculum or use sound instructional methods. A solid technical core of knowledge about learning has grown that provides a better understanding of the relationship between teacher behavior and pupil achievement. Research findings have demonstrated the links between teachers' understanding of factors, including time-on-task, mastery learning, classroom organization, and learning styles, and improved academic achievement in students. However, very little is done by school districts to assure that changes based on these findings actually take place in classrooms, or that teachers achieve the desired results. The entire school district, teachers, and administrators should begin exploring ways to link their organizational structure to the instructional core. A discussion is presented on how school districts may be redirected from their current function as institutionalized organizations into tightly coupled technical organizations that focus on instructional improvement.

**286. Wolf, Anne E., and M. Jane Greenwald. Developing an Observation Schedule for Coding Reading-Related Activities in the Secondary School Classroom. Paper presented at the annual meeting of the National Reading Conference, St. Petersburg Beach, Florida, 1978. 9p. Available ERIC. ED 166 684.

A study was undertaken as part of the process of trying to develop an instrument for systematically coding reading and other language arts activities in the secondary content area classroom. Six teachers chosen from five secondary schools were each observed while teaching four randomly selected classes over a two-week period. All observations were audiotaped and nonverbal activity was recorded in a log for use later by coders. Of the 22 categories in the schedule, 13 proved to be too narrow or too uncommon to discriminate among the teachers. In three other categories, behaviors occurred frequently but were so similar as to fail to distinguish among teachers. Six behaviors occurred with enough frequency and variety among teachers to justify calculating generalizability (reliability) coefficients for the categories. Data from this study suggest that reading and listening activities do occur in the content classroom with enough frequency and variety that reading and listening activity categories can be devised that will be generalizable.

**287. Worsham, Murray E. Student Accountability for Written Work in Junior High School Classes. Austin: Texas Univ. Research and Development Center for Teacher Education, 1981. 33p. Available ERIC. ED 203 387.

A study examined the accountability systems for student written work set up and cased by twelve junior high school

mathematics teachers. The five dimensions of accountability observed (1) clarity of overall work assignments, (2) procedures for communicating assignments and instructions to students, (3) teacher monitoring of work in progress, (4) routines for checking and turning in work, and (5) regular academic feedback to students. The characteristics of the effective teachers were then compared to those of effective junior high English teachers. Effective math and English teachers were in accord in their treatment of assignment due dates and were remarkably consistent in enforcing their own individual rules. Both effective math and English teachers varied in their methods for communicating assignments to students, but they were extremely consistent in efficient student monitoring techniques. Effective teachers from both disciplines were also consistent in checking assignments regularly. Two key actions on the part of the more effective teachers in both math and English classes followed the checking period: teachers asked students for their grades and recorded them immediately, and they always collected papers to check themselves, thus holding students accountable for the assignment. (Summaries of accountability systems used by two effective math teachers are appended.)

**288. Wright, Joyce. Teaching and Learning. A Study of Schooling in the United States. Technical Report Series, No. 18. Los Angeles: California Univ. Graduate School of Education, 1980. 191p. Available ERIC. ED 214 888.

Data analyses and interpretation are presented in this report on data obtained from "A Study of Schooling." For this study, data were collected from elementary, junior, and senior high schools (a total of 38 schools) through the use of classroom observation, questionnaires, and interviews. The data discussed in this report is concerned with educational structures, processes, and attitudes, and is presented in four sections. Section I considers instructional practices, teachers' and students' activities, and student perceptions of selected instructional practices. Classroom structures are examined in Section II, including data on teacher student ratios, classroom space and furnishings, student cooperative and independent learning, grouping practices, and individualization of instruction. Section III summarizes results of classroom observations of the use of time by students and teachers, decision making practices, and controls and restraints used by teachers. The data on classroom learning environment is explored in Section IV. Data on this topic was obtained from students' responses to survey questions and observers' judgments about the affective time of teacher student interactions. A profile of teacher student and student peer relationships emerged.

**289. Yeany, Russell H., and Charles F. Porter. The Effects of Strategy Analysis on Science Teacher Behaviors: A Meta-Analysis. Paper presented at the national conference of the National Association for Research in Science Teaching, Chicago, 1982. 16p. Available ERIC. ED 216 858.

Meta-Analysis procedures were employed to integrate existing science education research findings on the effectiveness of teaching strategy analysis training to: (1) determine overall magnitude of effect that can be expected from such training; (2) determine and compare relative magnitude of effects attributable to various approaches to such training (for example, self-analysis versus analysis of models, or microteaching versus no microteaching); (3) examine the relationship between the effect and the school level of the teacher (elementary, middle, or high school); (4) compare the effects when measured directly by recording teacher behaviors versus more indirectly when measuring student behaviors; and (5) calculate the effects assessed through behavioral versus cognitive or affective outcomes. Studies selected included those with sufficient statistical data to derive an effect size for treatment in the study (difference between baseline mean and treatment group mean in units equal to standard deviation of baseline data). Results indicated: (1) teaching strategy analysis is an effective training procedure; (2) all procedures presented had a positive impact on teachers' behavior, especially the use of models and providing systematic feedback (method of choice); and (3) positive effect sizes in cognitive and affective areas and across educational levels.

290. Yerg, Beverly J. Reflections on the Use of the RTE Model in Physical Education. Research Quarterly, v52 n1 p38-47 Mar 1981.

The ideal model for research on teacher effectiveness (RTE) specifies requirements including measures of outcome, teacher behavior, a study of classroom processes, as well as data collection procedures and analysis techniques. Specific topics of discussion relating to psychomotor learning include utilizing practice time, providing feedback, and measuring teacher mastery.

291. Young, Jon I. Behavioristic Approaches to Humanistic Education. Humanist Educator, v20 n2 p93-96 Dec 1981.

Discusses how some behavioristic techniques can increase humanism in schools. Describes activities to enhance students' active participation in the self-actualization process, including using behavioral objectives, evaluation, and grading. Defines classroom application of behavioral principles and suggests they encourage a humanistic environment.

*292. Zahorik, John A. Using Insights in Education. Journal of Teacher Education, v32 n2 p10-13 Mar-Apr 1981.

The major criticism of all research into teacher effectiveness is that results are too generalized and simplistic. The research is frequently based on perceptions of effective teaching rather than on demonstrated causes of student learning. Alternative research topics and methods are discussed.

BIBLIOGRAPHIES IN EDUCATION SERIES

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1	June 1969	Pre-Service Teacher Education in Canada ED 034 726	(o/p)	Oct. 1971
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5	Dec. 1969	Microteaching ED 036 480	(o/p)	
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